

EFFICIENCY OF BALERS FOR PROCESSING SECONDARY RAW MATERIALS

MACPRESSE O



MUNICIPAL SOLID WASTE PROCESSING



RECYCLING SECONDARY RAW MATERIAL



RENEWABLE ENERGY AND BIOMASS



PAPER INDUSTRY

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MACPRESSE PRODUCTS, OUR DISTINCTIVE VALUES

PRODUCTION EFFICIENCY Cutting efficiency and production optimisation (m3/h), high output specific weight.

REMOTE SOFTWARE SUPPORT Integrated troubleshooting modem.

ENERGY SAVING First class **Bosch-Rexroth** hydraulic pumps. MACPRESSE TYING Higly customisable system using plastic wire, steel wire or double steel wire.

HIGH WEAR RESISTANCE Patented HARDOX steel liners.

HIGH EFFICIENCY MOTORS High efficiency IE3 motors, reduced electricity consumption compared with traditional motors.

MACPRESSE QUALITY PROCESS

LIFE CYCLE OF MACPRESSE PRODUCTS, FROM DESIGN TO ON-SITE ASSEMBLY





STEP 2 COMPUTER NUMERICAL CONTROL (CNC)









MAC SERIES RECOVERY OF SECONDARY RAW MATERIALS



MATERIALS PROCESSED AND PERFORMANCE

		PET		CARDBOARD	MIXE	D PAPER	
	INFEED DENSITY						
	EUROPE	25/30 kg/m ³		70/80 kg/m ³	100	/120 kg/m ³	
	USA	1.56/1.87 lb/ft ³		4.37/4.99 lb/ft ³	6.24	1/7.49 lb/ft ³	
Mac	108/1	EUROPE PET 8 TON/H CARDBOARD 16 TON/H MIX PAPER 25 TON/H USA PET 8.8 TON (US)/H CARDBOARD 17.6 TON (US)/H MIX PAPER 27.6 TON (US)/H	Mac 110/1	EUROPE PET 10 TON/H CARDBOARD 18TON/H MIX PAPER 30 TON/H USA PET 11 TON (US)/H CARDBOARD 20 TON (US)/H MIX PAPER 33.1 TON (US)/H	Mac 111/1	EUROPE PET 12 TON/H CARDBOARD 22 TON/H MIX PAPER 35 TON/H USA PET 13.2 TON (US)/H CARDBOARD 24.3 TON (US)/H MIX PAPER 38.6 TON (US)/H	
Mac	111AS/1	EUROPE PET 14 TON/H CARDBOARD 25 TON/H MIX PAPER 40 TON/H USA PET 15.4 TON (US)/H CARDBOARD 27.6 TON (US)/H MIX PAPER 44.1 TON (US)/H	Mac 112XL	EUROPE PET 16 TON/H CARDBOARD 27 TON/H MIX PAPER 44 TON/H USA PET 17.6 TON (US)/H CARDBOARD 29.8 TON (US)/H MIX PAPER 48.5 TON (US)/H			





CUTTING AND THRUST POWER 120 TON / 264 500

Note: Performance rates, bale weights and bale densities are subject to moisture content, material pre-bale densities, feed rates nand other variables in baling.

EUROPE	2.5 m ³	525 m ³ /h	3.5	17 sec
USA	88 ft ³	18 540 ft ³ /h	3.5	17 sec

LOADING VOLUME VOLUMETRIC PRODUCTION CYCLES PER MINUTE

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GENERAL SPECIFICATIONS	EUROPE (MM)	USA
OVERALL LENGTH	13 220	43'4''
MAXIMUM WIDTH	5 835 (AT TIER STATION)	19'21''
OVERALL HEIGHT	4 055 (AT FLANGE HOPPER)	13'4''
FEED OPENING	1 800 x 950	71''x 37''½
BALE DIMENSIONS	1 100 x 1 000 (dimens. WxH)	43" ¹ /3 x 39" ½
BALER WEIGHT WITHOUT FLUFFER	38 650 Kg (less oil)	85 208 lb
BALER WEIGHT WITH FLUFFER	43 450 Kg (less oil)	95 790 lb
NUMBERS OF WIRES	5	5

	MAIN MOTOR POWER	RAM FORCE
	75 kw	120 000 kg 264 500 lb
t to moisture content, material	MAIN HYDRAULIC PUMP	RAM FORCE PRESSURE
17 sec	One "REXROTH" variable flow pump with full regenative circuit	11 kg/cm ² 155 PSI
17 sec	PUMP FLOW CAPACITY	OIL RESERVOIR CAPACITY
	364 I/min 96 GPM	3 100 Lt 820 US Gal
	OPERATING PRESSURE	COOLING SYSTEM
	220-280 Bar (3200-4000 PSI) 315 Bar (4500 PSI)	Thermostatically controlled air to oil heat exchanger
E CYCLE TIME	MAIN CYLINDER	OPERATING CONTROL
MODEL	bore 220 mm - 8'' ² / ₃	Siemens S7 300 programmable controller
MAC 108	3/	¹⁸⁰⁰ 5'.11*
EUROPE PET 8 TON/H		6405 21
CARDBOARD 16 TON/H MIX PAPER 25 TON/H		950 3.1
USA PET 8.8 TON (US)/H	······································	
CARDBOARD 17.6 TON (US)/H MIX PAPER 27.6 TON (US)/H	³²²⁰ 93-91-	19.2"
		5835





CUTTING AND THRUST POWER 170 TON / 374 800 LB

NO LOAD PERFOMANCE

Note: Performance rates, bale weights and bale densities are subject to moisture content, material pre-bale densities, feed rates nand other variables in baling.

EUROPE	2.5 m ³	600 m ³ /h	4	15 sec
USA	88 ft ³	21 186 ft ³ /h	4	15 sec

LOADING VOLUME VOLUMETRIC PRODUCTION CYCLES PER MINUTE

CYCLE TIME	

GENERAL SPECIFICATIONS	EUROPE (MM)	USA
OVERALL LENGTH	12 960	42'6''
MAXIMUM WIDTH	5 945 (AT TIER STATION)	19'6''
OVERALL HEIGHT	4 055 (AT FLANGE HOPPER)	13'4''
FEED OPENING	1 800 x 1 020	71'' x 40''
BALE DIMENSIONS	1 100 x 1 100 (dimens. WxH)	43'' ¹ /3 x 43'' ¹ /3
BALER WEIGHT WITHOUT FLUFFER	40 900 Kg (less oil)	90 169 lb
BALER WEIGHT WITH FLUFFER	49 500 Kg (less oil)	109 128 lb
NUMBERS OF WIRES	5	5



EUROPE PET 10 TON/H MIX PAPER 30 TON/H

USA PET 11 TON (US)/H CARDBOARD 20 TON (US)/H MIX PAPER 33.1 TON (US)/H

MAIN MOTOR	RAM
POWER	FORCE
90 kw	170 000 kg
	374 800 lb
MAIN HYDRAULIC	RAM FORCE
PUMP	PRESSURE
One "REXROTH" variable flow	14 kg/ cm ²
pump with full regenative circuit	200 PSI
PUMP FLOW	OIL RESERVOIR
CAPACITY	CAPACITY
580 l/min	3 100 Lt
153 GPM	820 US Gal
OPERATING PRESSURE	COOLING
220-280 Bar (3200-4000 PSI) 315 Bar (4500 PSI)	Thermostatically controlled air to oil heat exchanger
MAIN	OPERATING
CYLINDER	CONTROL
bore 260 mm - 10" ¹ /5	Siemens S7 300 programmable controller
6100 20° q1. 12960 q2° 65 10 22 12.	17. 500 5:17. 17. 509 17. 509
	5977





CUTTING AND THRUST POWER 170 TON / 374 800 LB

NO LOAD PERFOMANCE

Note: Performance rates, bale weights and bale densities are subject to moisture content, material pre-bale densities, feed rates nand other variables in baling.

EUROPE	2.5 m ³	750 m ³ /h	5	12 sec
USA	88 ft ³	26 500 ft ³ /h	5	12 sec

LOADING VOLUME VOLUMETRIC PRODUCTION CYCLES PER MINUTE

GENERAL SPECIFICATIONS	EUROPE (MM)	USA
OVERALL LENGTH	12 960	42'6''
MAXIMUM WIDTH	5 945 (AT TIER STATION)	19'6''
OVERALL HEIGHT	4 055 (AT FLANGE HOPPER)	13'4''
FEED OPENING	1 800 x 1 020	71'' x 40''
BALE DIMENSIONS	1 100 x 1 100 (dimens. WxH)	43'' ¹ / ₃ x 43'' ¹ / ₃
BALER WEIGHT WITHOUT FLUFFER	41 900 Kg (less oil)	92 373 lb
BALER WEIGHT WITH FLUFFER	46 900 Kg (less oil)	103 396 lb
NUMBERS OF WIRES	5	5

MODEL MAC 111/⁻

CYCLE TIME

EUROPE PET 12 TON/H CARDBOARD 22 TON/H MIX PAPER 35 TON/H

USA

PET 13.2 TON (US)/H CARDBOARD 24.3 TON (US)/H MIX PAPER 38.6 TON (US)/H

RAM FORCE
170 000 kg 374 800 lb
RAM FORCE
14 kg/ cm ² 200 PSI
OIL RESERVOIR
CAPACITY 3 100 Lt
820 US Gal
COOLING SYSTEM
Thermostatically controlled air to oil heat exchanger
OPERATING CONTROL
Siemens S7 300 programmable controller
1800 5:17- 1000 3:4 1000 3:4 5045 19:6



2X100 HP MOTORS POWER

NO LOAD PERFOMANCE

CUTTING AND THRUST POWER 170 TON / 374 800 LB

Note: Performance rates, bale weights and bale densities are subject to moisture content, material pre-bale densities, feed rates nand other variables in baling.

USA 113 ft ³ 33 900 ft ³ /h 5 12 sec	EUROPE	3.2 m ³	960 m ³ /h	5	12 sec
	USA	113 ft ³	33 900 ft ³ /h	5	12 sec

LOADING VOLUME VOLUMETRIC PRODUCTION CYCLES PER MINUTE

GENERAL SPECIFICATIONS	EUROPE (MM)	USA
OVERALL LENGTH	13 970	45'10''
MAXIMUM WIDTH	5 945 (AT TIER STATION)	19'6''
OVERALL HEIGHT	4 055 (AT FLANGE HOPPER)	13'4''
FEED OPENING	2 100 x 1 020	82½'' x 40''
BALE DIMENSIONS	1 100 x 1 100 (dimens. WxH)	43'' ¹ / ₃ x 43'' ¹ / ₃
BALER WEIGHT WITHOUT FLUFFER	43 200 Kg (less oil)	95 239 lb
BALER WEIGHT WITH FLUFFER	48 500 Kg (less oil)	106 924 lb
NUMBERS OF WIRES	5	5

MAIN MOTOR

CYCLE TIME

MAC 111AS/1

MODEL

EUROPE PET 14 TON/H

USA

CARDBOARD 25 TON/H MIX PAPER 40 TON/H

PET 15.4 TON (US)/H

POWER 2x75 kw

TECHNICAL DATA

RAM FORCE 170 000 kg

374 800 lbs

RAM FORCE

MAIN HYDRAULIC PUMP Two "REXROTH" variable flow

pump with full regenative circuit

220-280 Bar (3200-4000 PSI)

PUMP FLOW

CAPACITY

OPERATING

PRESSURE

315 Bar (4500 PSI)

bore 260 mm - 10"¹/5

910 l/min

240 GPM

MAIN **CYLINDER** PRESSURE 14 kg/cm² 200 PSI

OIL RESERVOIR CAPACITY

3 100 L 820 US Gal

COOLING SYSTEM

Thermostatically controlled air to oil heat exchanger

OPERATING CONTROL

2100 6'-11"

Siemens S7 300 programmable controller

> 21 5405

5945 19'-6"





9V190	חע	CUTTING AND	THRUST POW	ER	TECHNICAL DATA
MOTOR POWE	R	200 TON	/ 441 (IOO LB	MAIN MOTOR POWER 2x90 kw
NO LOAD PERFON	Not Pre	te: Performance rates, bale weigh -bale densities, feed rates nand c	nts and bale densities are su other variables in baling.	ubject to moisture content, material	MAIN HYDRAULIC PUMP Two "REXROTH" variable flow
EUROPE	2.6 m ³	702 m ³ /h	4.5	13.5 sec	pump with full regenative circuit
USA	92 ft ³	24.791 ft ³ /h	4.5	13.5 sec	PUMP FLOW CAPACITY
					1 035 l/min 273 GPM
					OPERATING
					220-280 Bar (3200-4000 PSI) 315 Bar (4500 PSI)
LC	ading volume	VOLUMETRIC PRODUCT	TION CYCLES PER MIN	UTE CYCLE TIME	MAIN CYLINDER
					bore 280 mm - 11"
GENERAL SPECIFI	CATIONS	EUROPE (MM)	USA	MODEL	
OVERALL LENGTH		13 970	45'9''		
MAXIMUM WIDTH		5 965 (AT TIER STATION)	19'7''		
OVERALL HEIGHT		4 275 (AT FLANGE HOPPER)	14'0''		
FEED OPENING		2 000 x 1 020	79" x 40"	EUROPE	
BALE DIMENSIONS		1 100 x 1 100 (dimens. WxH)	43'' ¹ / ₃ x 43'' ¹ / ₃	PET 16 TON/H CARDBOARD 27 TON/H	
BALER WEIGHT WITHO	OUT FLUFFER	55 500 Kg (less oil)	122 356 lb	MIX PAPER 44 TON/H	340 22; g,
BALER WEIGHT WITH	FLUFFER	60 600 Kg (less oil)	133 600 lb	USA PET 17.6 TON (US)/H	13950 95:0. 010 23,
NUMBERS OF WIRES		5	5	MIX PAPER 48.5 TON (US)/H	

CAPACITY 3 500 L 925 US Gal COOLING SYSTEM 00-4000 PSI) :D **OPERATING** CONTROL 1" 2000 6'-7" 1020 3.4" 7010 23' 5965 19-7"

Thermostatically controlled air to oil heat exchanger

RAM FORCE

200 000 kg 441 000 lbs

RAM FORCE

OIL RESERVOIR

PRESSURE

16,5 kg/cm² 235 PSI

Siemens S7 300 programmable controller

6615 21'-8"





CORE VALUE



HARDOX STEEL LINERS





LONG LASTING ROBUSTNESS

EASY MAINTENANCE



THIS WEAR RESISTANT SYSTEM PROTECTS THE BALER FROM ABRASION AND CORROSION.

Replaceable liners made of HARDOX wear-resistant steel alloy that extends working life of the equipment. The wear liners are bolted in the extrusion chamber and in the compaction box and can be easily replaced.

 RESISTANCE TO WEAR AND CHEMICAL AGENTS
RAPID REPLACEMENT (PATENTED ATTACHMENT SYSTEM)
MINIMIZE BALER DOWNTIME



LONGER LASTING

THAN NORMAL STEEL







CUTTING SYSTEM

CORE VALUE







Fast Interchangeability LOW ENERGY CONSUMPTION LONG

HIGH EFFICIENCY BLADE

BLADES DESIGNED BY MACPRESSE TO OPTIMISE CUTTING OF EXCESS MATERIAL IN HOPPER. THE BLADE ARE TEMPERED TO ENSURE A LONGER SERVICE LIFE.

COUNTER-PRESSURE SYSTEM





HYDRAULIC QUICK RELEASE CIRCUIT FOR FAST ZERO-SETTING OF COUNTERPRESSURE SHOULD A FOREIGN OBJECT ACCIDENTALLY FALL IN THE HOPPER.



HYDRAULICS

CORE VALUE



Rexroth Bosch Group





HARSH ENVIRONMENTS LOW ENERGY CONSUMPTION MAIN

EASY MAINTENANCE

PUMPS POSITIONED OUTSIDE OF OIL TANK FOR A BETTER PERFORMANCE AND EASIER MAINTENANCE. THE INSTALLATION OF VARIABLE FLOW PUMPS PROVIDES A BETTER PERFORMANCE WITH REDUCED ELECTRICAL CONSUMPTION. HIGH EFFICIENCY IE3 MOTORS ARE USED WITH AN ENERGY SAVINGS OF 30% COMPARED WITH TRADITIONAL MOTORS.

SMART SYSTEM ADAPTABLE TO MATERIAL

30%

ENERGY SAVINGS

COMPARED WITH TRADITIONAL MOTORS









CONSUMPTION - CYCLE TIME DIAGRAM

PRESSURE - CYCLE TIME DIAGRAM

RAM SPEED - CYCLE TIME DIAGRAM



FLEXIBILITY OF USE AND OPTIMISATION OF COSTS



ELECTROMECHANICAL HORIZONTAL TYING SYSTEM DESIGNED FOR TYING BOTH PLASTIC AND STEEL WIRES

This system simplifies the cleaning process for the tying machine, guaranteeing greater safety for the operator. The maintenance and cleaning of the tying machine is carried out at floor level operations on the steel wire are not required beneath the machine.

TYING METHOD



MOBILE TYING MACHINE (OPTIONAL)







ELECTRICAL COMPONENTS

CORE VALUE



SHEATHS FOR ELECTRIC CABLES PROTECTION



OPERATOR SAFETY

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EASY MAINTENANCE

CONNECTION OF ELECTRICAL COMPONENTS

Connections using SCART leads and electrical cables protected by rodent-proof and fire-resistant sheaths



OPTIONAL





LOW COST





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HEAVY HIGH CONSTRUCTION PRODUCTION EASY MAINTENANCE

DESIGN AND MANUFACTURE INTEGRATED WITH THE PRESS

STEEL PLATE CONVEYOR

Conveyor belts are designed and manufactured to match hourly productions rates for each baler model optimizing operating costs.

P MODEL 4-5,5-7,5 KW 200 MM MOTOR POWER CHAIN PITCH

RDF - RECYCLABLES

PRE-CONDITIONERS FOR WASTE PAPER

OPTIONAL



EASY MAINTENANCE

CONDITIONER FOR WASTE PAPER

MECHANICAL DEVICE FOR PROCESSING PAPER MATERIALS, TO REDUCE **DENSITY PRIOR TO COMPACTION, OBTAINING:**

- INTEGRITY OF IDEAL BALES
- REDUCED ELECTRICAL CONSUMPTION
- GREATER DENSITY
- EASY HANDLING





SHREDDERS

ELECTRICAL SINGLE SHAFT WITH BOLTED HAMMERS. ALLOWS HIGH DENSITY, COATED, FIBROUS MATERIALS TO BE PRE-CONDITIONED.

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OPERATOR

SAFETY

ALLOWS APPROPRIATE MIXING OF DIFFERENT QUALITIES OF WASTE AND REDUCES WEAR OF PRESS. HIGH PRODUCTIVITY EVEN WITH MATERIALS IN PACKS.

MACPRESSE PRODUCES SPECIAL MACHINES FOR THE PAPER INDUSTRY, AUTOMATIC PRESSES WITH AN HOURLY OUTPUT OF **BETWEEN 3 AND 60 TONS PER HOUR** AS WELL AS OTHER ANCILLARY **EQUIPMENTS**



- FAULT SIGNALLING

- REAL TIME PRODUCTION REPORT

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- PHOTOGRAPHIC FAULT DISPLAY

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PROPORTIONAL VALVE OPTIONAL

IMMEDIATE RECONFIGURATION OF MACHINE PARAMETERS FOR MULTI-MATERIAL PROCESSING

AUTOMATIC CONFIGURATION OF BALING PARAMETERS ACCORDING ON SELECTED INFEED MATERIALS, TO ACHIEVE MAXIMUM BALE DENSITY, **REDUCTION OF TRANSPORT COSTS**

PROCESSING ADVANTAGES:

OPTIMISED BALES WEIGHT ACCORDING TO MATERIAL TO BE BALED

MACPRESSE HARDOX





OPTIMISATION



SAFETY COMPONENTS OF

OPTIONAL



OPERATOR SAFETY SYSTEM

MSB (MAC SAFETY BELT) IS A MACPRESSE PATENT

THIS SPECIAL INNOVATION PROTECTS EMPLOYEES SHOULD THEY FALL ONTO THE CONVEYOR. THE EQUIPMENT IS IMMEDIATELY STOPPED AND AN ALARM IS SOUNDED TO ALERT OTHERS OF AN ACCIDENT. THE EQUIPMENT CANNOT BE RESTARTED UNTIL THE EMPLOYEE IS REMOVED FROM THE DANGER ZONE.

MSK MAC SAFETY KEYS

INSTALLED ON ALL EQUIPMENT ACCESS DOORS.





PLASTIC BALES & STORAGE

PLASTIC MATERIALS

TETRAPACK











MULTI-MATERIAL BALES

BALES INTEGRITY



TRANSPORT EFFICIENCY

RAIL AND ROAD TRANSPORT



MARTIME



BALING PRESS AND SHREDDER



BALING PRESS AND FLUFFER CONDITIONER





tel. +39 02 905 24 20

IMPERMEABLE

HIGH DENSITY

BALES

EASILY TRANSPORTABLE OPTIMUM STOWAGE SEA TRANSPORT

ROAD TRANSPORT RAIL TRANSPORT