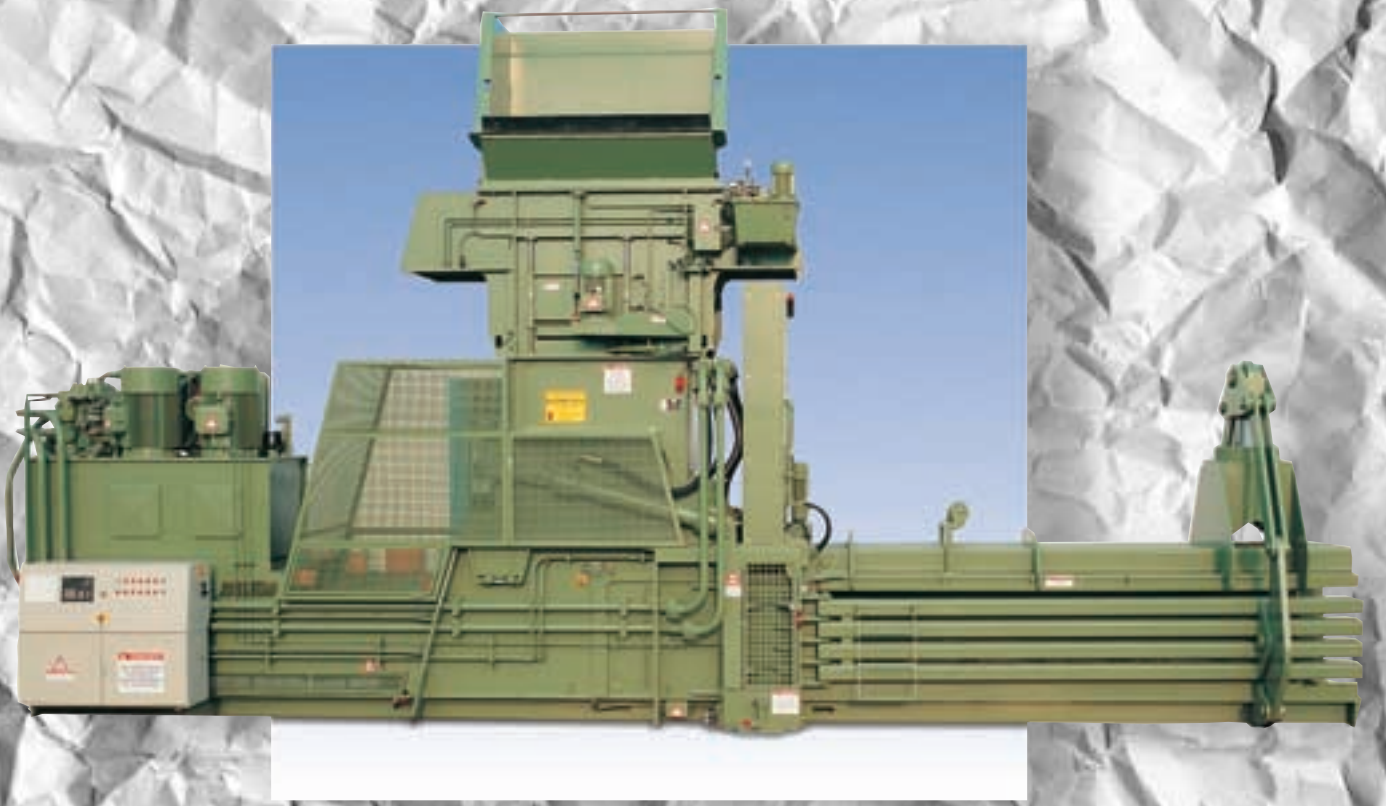
Bollegraaf



HBC 140 ***Baler***

HB PERSEN

Bollegraaf. Big in making recyclables small.

High Efficiency / Low Power Consumption

The HBC 140 baler is one of the largest balers in the Bollegraaf range and was designed for waste processors who have high capacity and bale weight requirements. The 140 has the capability of processing waste paper and materials at a high speed into very dense, homogeneously packed bales while using minimal power. The production process is highly efficient and incorporates the latest technological advances to ensure smooth operations and a long service life for the machine. An added advantage is that more densely packed bales also save on transportation costs, since more waste is processed into each bale.

Pre-Press Flap
The HBC 140 is equipped with a large, quarter cylinder pre-press flap. The pre-press flap enables the machine to process twice the amount of material as a shear baler in a given time period. This means that the 140 requires less horse power to process material at the same capacity as a shear baler. The superior 'fill process' also results in densely compacted bales that are rectangular in shape and uniformly packed on top as well as bottom. Another important advantage of the pre-press flap is the lower maintenance costs that are inherent in a machine which doesn't use shears. There will never be a need to replace wear strips or shear blades and the design of the production process eliminates the wear on the bottom of the bale chamber that is produced by shear balers. Since the pre-press flap cylinders retract to close the flap, there is always an abundance of pressure to re-open the flap for the next cycle.

Low-Noise Pump
The internal gear pumps are built to run quietly, so the baler noise level is less than 80 dB. The volumetric efficiency of internal gear pumps is also much higher than for variable plunger pumps, requiring less power at the same compaction rate.

Wear-Resistant Ram
The bottom and sides of the compaction ram have wheels with roller bearings. Contrary to plastic guides, the wheels enable the ram to have a much longer service life and lower maintenance costs.

Hydraulic Cylinders
Each cylinder is manufactured with a specially-made cup seal for a long service life and low maintenance costs. The ram cylinder and flap cylinders are suspended with pivots to avoid radial loads. Each of these features contribute to overall durability and extend the life of the cylinder.

Needle Head

Patented Needle Heads
The HBC 140 comes standard with reinforced needle heads which pull the wires around the bales. The needles are 50 mm (2") in diameter and are equipped with a fitted wire wheel which prevents dirt build-up. With this design, shut-downs for cleaning the needle heads are virtually eliminated.

Twistomat IV
The HBC 140 has an advanced wire tying unit, which was designed to handle even the most stringent requirements. The unit features:
- high speed bale wiring;
- increased hydraulic wire cutting capability (cuts wires up to 4 mm thick);
- enclosed drive for the tying mechanism, preventing dust build up and keeping maintenance requirements low;
- increased twisting speed;
- minimal wire breakage.

PLC
The fully-automatic PLC control system ensures a problem free process. The HBC 140 is electronically controlled by the latest generation of PLCs, which eliminates failures in the process automatically through optimal programming. The result is a dependable pre-press flap.

Hydraulic Cilinders

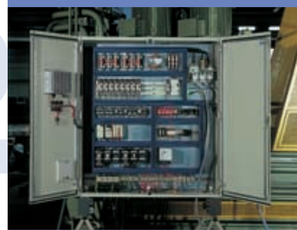
Optimal use of loading space. Speeding up loading and unloading.

Hydraulic System
The hydraulic system has a manifold block on which all valves are mounted. The larger size of the manifold block prevents oil pressure loss that occurs with piping systems. This technologically advanced design gives the HBC 140 a higher compaction force than other balers. The hydraulic oil level and temperature are monitored electronically, and there is a control panel to indicate warnings or mal-functions of any kind. The ram and the pre-press flap are controlled by high-flow cartridge valves, which prevent pressure losses and pressure surges in the hydraulic system, and contribute to the efficient operation and speed of the baler.

Maximum Speed and Efficiency
The ram cylinder is extended using a regenerative circuit when the compaction ram does not have to apply any compaction force. This increases the pre-pressing speed. The cylinder rod diameter is larger than that of standard cylinders, and the ram return speed is much higher. If sufficient material is supplied, the pre-press flap is opened at the same time the ram is returned. All these provisions allow for maximum capacity with minimal energy consumption compared to other balers.

Advantages of the HBC 140
- Low power consumption at maximum capacity.
- Low maintenance costs due to the design of the pre-press flap and the use of high-quality durable parts.
- Sound design and long service life, the frame is constructed of 30 mm steel plate.
- Low noise level due to use of internal gear pumps and cartridges.
- Homogenous and uniform rectangular heavy-weight bales due to the higher fill factor resulting from the pre-press flap.
- Ability to bale all types of material because no shearing is necessary in the baling process.
- Roller bearings are provided for all wheels for extended service life and reduced wear and tear, resulting in low maintenance costs.

▲
We provide our hydraulic balers with an AS interface (AS-I bus) to ensure better control of our machines. This AS interface is used to read the data collected by the sensors during the production process.



▲
The PLC control system ensures a problem-free fully-automatic process.

▲
Tailor-made work of a high standard. The high-quality machines are designed by our specialists using an extensive network of CAD stations. The steel plate parts are flame cut by a CNC-controlled flame cutting machine. The combination of know-how and technological skills produces high standard tailor-made work.

HBC 140

Five Options for Specific Requirements

◀ **TurboPress (Patented)**
The capacity of the HBC 140 can be greatly increased by the TurboPress. This results in faster and more economical operations. The TurboPress compacts the material in the feed hopper. The feed hopper volume is therefore used to its maximum. This increases the capacity by no less than 300%. The Turbo-Press is particularly indispensable when processing low bulk materials such as shop cartons, pre-shredded or destructed materials.
Motor power: 2.2 kW (3 HP).

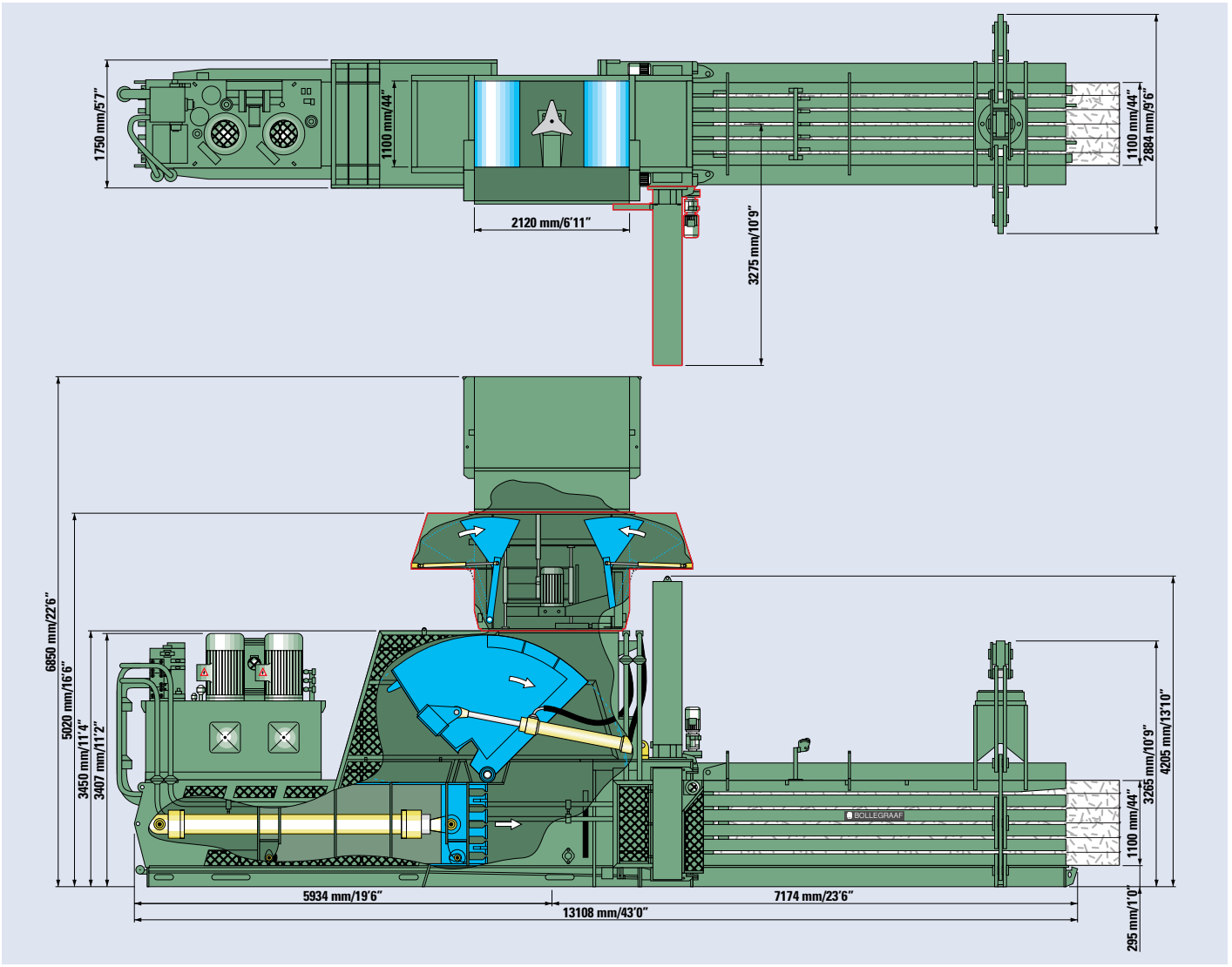
▲ **Cross-Wires**
The HBC 140 baler can be equipped with an advanced cross-wire unit in which, as well as from the standard five vertical wires, five horizontal wires can also be pulled around the bales. This is important when materials, which are difficult to compress, are processed, such as coated and laminated types of paper and plastics. The HBC 140 produces perfect bales with cross-wires and material waste is kept to a minimum.
Knotter motor: 2.2 kW (3 HP).

◀ **W'hopper**
For processing larger waste items (TV boxes, for example) the HBC 140 can be fitted with a wider feed opening, the W'hopper. This allows even extremely bulky materials to be compacted without pre-processing in a shredder. The W'hopper for the HBC 140 has a width of 2,000 mm (6'7").
Motor power: 4 kW (5.5 HP).

▼ **B.I.O.S. & Display**
The HBC 140 baler can be equipped with the Bollegraaf Information & Operating System (B.I.O.S.). This allows specific preferred settings to be programmed. Moreover, the B.I.O.S. control display provides relevant information about the production process, such as power consumption, wire consumption, compaction force, compaction time and actual capacity per type of material. This data is recorded, as is the data relating to maintenance and failures.

◀ **Ruffler**
The 'Ruffler' ensures uniformly composed bales during the supply of high bulk density material into the feed hopper. As soon as materials such as magazines, newspapers, computer paper, etc. are discharged into the feed hopper, a rotating impeller uniformly distributes these materials in the feed hopper. In that way the ruffler ensures rectangular, evenly composed and homogeneous bales.
Motor power: 11 kW (15 HP).

Technical Specifications



* ——— = Option

	HBC 140
Hopper size	1,600x1,100 mm (5'3"x3'7")
Feeding conveyor width	max. 1,600 mm (5'3")
Pre-press flap pressure	70 Mp/tonf (77 tonf)
Hydraulic motor	2x75 kW (2x100 HP)
Pressure force	140 Mp/tonf (154 tonf)
Capacity/cycle	4.3 m^3 (152 ft^3)
Cycle time with material	16 sec.
Knotter motor	2.2 kW (3 HP)
Baler weight	44 tons (48.4 tons)
Bale dimension WxH	1,100x1,100 mm (44"x44")
Bale length	adjustable
Bale weight	900-1,500 kg (1984-3307 lbs)
Capacity at a S. G. (specific gravity) of	
20 kg/m^3 (1.24 lbs/ft^3)	22.7 tons/hr. (25 tons/hr.)
35 kg/m^3 (2.2 lbs/ft^3)	35.8 tons/hr. (39.4 tons/hr.)
50 kg/m^3 (3.1 lbs/ft^3)	46.9 tons/hr. (51.6 tons/hr.)
100 kg/m^3 (6.2 lbs/ft^3)	82.3 tons/hr. (90.5 tons/hr.)
200 kg/m^3 (12.4 lbs/ft^3)	122.2 tons/hr. (134.4 tons/hr.)
Capacity when ruffler is used	approx. 50 tons/hr. (approx. 55 tons/hr.)

*Subject to modifications

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