Bollegraaf Recycling Solutions | Lubo Recycling Solutions

High-tech hydraulic unit 1
- Compact system layout
- Smooth-running hydraulics
- Energy-efficient oil cooling unit
- High-quality cylinders

Unique pre-press flap 2
- Optimizes baling capacity
- Saves energy and time
- Reduces wear and tear
- Lower operational costs
- More versatile

Mainpress 3
- Strong proven design, minimal wear parts
- Fast-acting

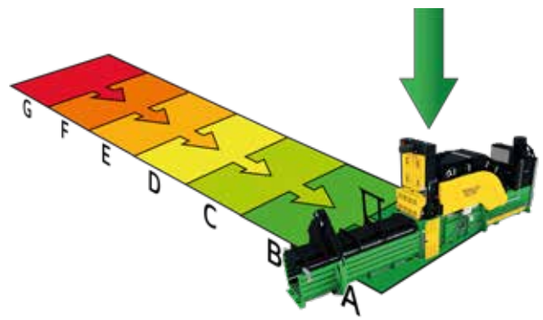
Advanced tying system 4
- Single needle system
- Unique twist finger

Smart operating system 5
- Full process control
- Storage and feedback of process data
- Quick preset menus
- Touch screen control
- Real-time baler data

Hydraulic power pack 6
- Lowers power consumption
- Improves lifespan of oil
- Less wear on pumps and motors
- Removes spikes in system
- Reduces noise levels

THE ADVANTAGES

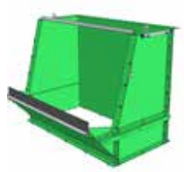
- **Optimized Total Cost of Ownership**
- **Higher bale density**
- **Reduced production time**
- **Low energy usage**
- **High versatility**
- **Easy operation**



AVAILABLE OPTIONS: 1 = FEEDING / 2 = MAINTENANCE / 3 = WIRE TYING / 4 = DURABILITY / 5 = EFFICIENCY / 6 = ELECTRICS & CONNECTIVITY / 7 = SAFETY / 8 = STATISTICS & DATA

1A BELT INFEED HOPPER FOR EXTRA WIDE FEED HOPPER

The belt infeed hopper provides a proper connection between baler and feeding conveyor when the baler is equipped with a Bollegraaf extra wide feed hopper (EWFH).



1B DUST HOOD

The dust hood closes off the feed conveyor and belt infeed hopper.
This way spillage and dust coming from the materials that are being processed can be limited.The dust hood is equipped with an inspection hatch of 600mm*600mm.

1C EXTRA WIDE FEED HOPPER (NO RUFFLER)

In order to deal with the in-flow of larger pieces of waste that are carried in on a wide conveyor belt (2000 mm), the baler can be equipped with a wider feed hopper (filling aperture). The extra wide feed hopper is mounted on the filling opening of the baler.

1D EXTRA WIDE FEED HOPPER WITH PERFORATOR (NO RUFFLER)

The extra wide feed hopper can be combined with a perforator.
The equipment is set up in such a manner, that only one of these two devices is in operation at the same time.

1E EXTRA WIDE FEED HOPPER WITH RUFFLER

The extra wide feed hopper can also be equipped with a hydraulically driven ruffler, whereby the control is hydraulically integrated with that of the hopper.

1F EXTRA WIDE FEED HOPPER WITH RUFFLER AND PERFORATOR

The extra wide feed hopper is fitted with both a perforator as well as a hydraulic driven ruffler, the operation of which is integrated hydraulically with that of the hopper.

1G HYDRAULIC RUFFLER

The ruffler for the HBC balers was designed to deal with types of paper that are difficult to compact (for instance high specific weight or very slippery materials).

1H PET BOTTLE PERFORATOR

The Bollegraaf bottle perforator is a system to perforate plastic bottles (PET), prior to the material entering the press. After perforation, the material can be effectively pressed into bales which are more homogeneous, compacter and heavier.

2A CLEANOUT DOOR FOR BELT INFEED HOPPER (NO EXTRA PLATFORM)

The cleanout wall is used to gain access to the belt infeed hopper in case of jamming caused by for example light voluminous cardboard boxes that get stuck, after they are fed into the hopper.

2B AUTO CENTRAL LUBRICATION SYSTEM

The automatic lubrication system uses an electrically driven grease pump mounted on the side of the baler. Multiple grease distributors ensure a correct dosage of grease to the points to be lubricated.

2C CLEANOUT CONVEYOR UNDER BALER

This conveyor is used to automatically remove material that accumulates under the vertical needle installation. This avoids the regular necessity of manually cleaning under the baler. The removed material can be collected easily by for example placing a container at the end of the conveyor.

2D LIFTING DEVICE KNOTTER

The hydraulic lifting mechanism of the tying system ensures easy maintenance of the tying system, the needle heads, and the needle rods.
The lifting mechanism is avaiable for both the vertical and horizontal needle installation.

2E OIL DRIPTRAY

A steel driptray is placed under the hydraulic unit of the baler. In the case of leaks, no oil will be spilled onto the factory floor.
The tray is dimensioned to theoretically hold the entire oil volume of the hydraulic unit.

2F OIL IN-DEPTH FILTRATION

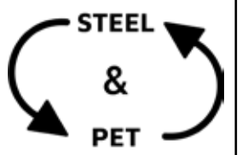
An external filter unit is installed to remove contamination (up to 1 micron) from the hydraulic oil. By means of a motor-pump unit, which is integrated in the filter unit, the oil is pumped from the tank, filtered, and pumped back into the tank in a highly purified condition.

2G WIRE-BREAK DETECTION

The wire-break detection option warns whenever one of the baling wires is broken or when the wire is all used up. With wire brake detection, sensors are added to the wire guiding wheels that monitor the rotation. Available for both horizontal and vertical baling wires.

3A BALER PREPARED FOR PLASTIC WIRES VERTICAL NEEDLES (PET)

The tying installation for the vertical wires of the baler can be set up to tie up bales with plastic wires. This can be beneficial for certain situations where steel wire would lead to problems in the processing of the finished bales.



3B CROSS WIRES

In addition to the standard 5 vertical wires, bales can also be tied with 3 or 5 horizontal wires. As a result, a minimum amount of material drops out of the bale during handling.

3C HORIZONTAL WIRES ONLY

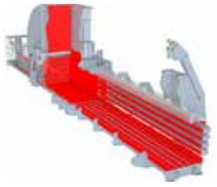
The standard configuration for every baler is a vertical needle installation. In this configuration only a horizontal needle installation is used.

4A ANTI-RAT CABLING

The electrical cables of the baler are pulled through a steel-reinforced hose as a protection against rodents. Available for the full baler or up to a height of 1.5 meters (approx. 59 inches) above the floor.

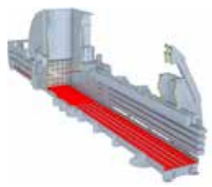
4B FULL HARDOX LINING

Hardox is a very hard-wearing steel type especially designed to be resistant to abrasives. Hardox plates are advised when materials are processed that contain a high amount of sand, glass or other abrasives.



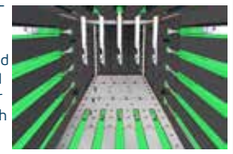
4C HARDOX BOTTOM FLOOR PLATE ONLY

The baler will be equipped with a Hardox bottom plate. Thanks to the great resistance to wear and tear of Hardox, the lifespan of the baler's bottom plate is lengthened.



4D BOLTABLE HARDOX WEAR PLATES

The balers HBK60, HBC130 and HBC150S can be equipped with boltable Hardox plates. When worn out, these plates can be replaced more easily than traditional stitch welded plates. Larger bale chamber doors on both sides of the machine allow the plates to be removed from the inside of the baler.



5A ADAPTIVE PROPORTIONAL CHANNEL PRESSURE SYSTEM (APCP)

The APCP regulates both pressure as well as continuously variable oil supply automatically so that the baling process will always perform optimally. The APCP controls the hydraulic system in such a way that regardless of the type of material properties (hard, soft, smooth, rough, dense or voluminous), conditions (wet or dry) and filling method, the bales are formed as compact as possible.

5B EXTRA CHANNEL CILINDER

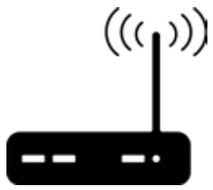
To increase the bale weight the baler can be equipped with an extra channel cylinder that is fitted in the middle of the channel to distribute the counterpressure more effectively over the bale. Dispersion of force prevents the channel from twisting so that the material can be pressed more smoothly through the channel and there will be less stress on the frame. The increase in weight and density of the bales reduces wires breaking and requires less tying wire per ton.

5C HYDRAULIC PUMP FREQUENCY CONTROLLED

The main hydraulic pump motor(s) can be equipped with a frequency inverter. The use of a frequency controller has several (electrical) benefits.

6A MODEM

A modem makes it possible for Bollegraaf Service technicians to remotely connect to the baler's PLC through an internet connection. This can be useful to help diagnose problems in the software or optimizing settings for specific materials.



6B UNINTERRUPTIBLE POWER SUPPLY

The UPS can provide emergency power to the machine, when the regular input power source fails. The run-time of the uninterruptible power supply is relatively short but sufficient to properly shut down and protect the equipment. The UPS is used to protect hardware such as the PLC, HMI, and other sensitive hardware in the switchbox where an unexpected power disruption could cause software problems, hardware failure or data loss. This option is available for Siemens PLC's.

7A BOSS: BOLLEGRAAF OPERATOR SAFETY SYSTEM

BOSS puts an electromagnetic field around the danger zone the top section of the feed conveyor and the opening of the baler. The size of this field can be set (1-6 meters) so you can adjust this zone to suit your situation.

7B MECHANICAL SAFETY INTERLOCKS

In addition to an electric safety switch, the access doors can also be equipped with a mechanical lock. Access is obtained with a key that becomes available when the main switch of the switch box is locked.

8A BIOS SCADA

The BIOS SCADA plugin allows data regarding the performance of a baler to be processed in an external SCADA (Supervisory Control and Data Acquisition) system.

8B BIOS STATISTICS

With BIOS statistics the standard execution of BIOS will be expanded with multiple logged data that supplies the user with extra insights in the operation of the baler. The data can be found through the control panel. The following statistics can be read out per day /month for a total of 12 months: Time on press – Total running time baler / Wire usage / Time in automatic / Waiting time for material / Efficiency in automatic / Efficiency according to schedule.

8C BIOS ENERGY

With BIOS Energy the standard operating system is expanded with information on:
- Total energy consumption for processed material
- Energy consumption average per bale

To register the consumption, the switchbox will be supplied with a KWh-meter.

8D BIOS OFFICE

BIOS Office provides a reporting functionality. The registration of the production data is made available in an Office-environment over a network. The network connection from the office to the switchbox of the baler is not part of the delivery. Through the Bollegraaf software, a multitude of data can be read out. BIOS Office will be installed on a separate PC and can export all these reports in metric or imperial units to PDF, Microsoft Excel, or Word.

CREATING A WORLD OF DIFFERENCE

www.bollegraaf.com

Bollegraaf Recycling Solutions | Lubo Recycling Solutions