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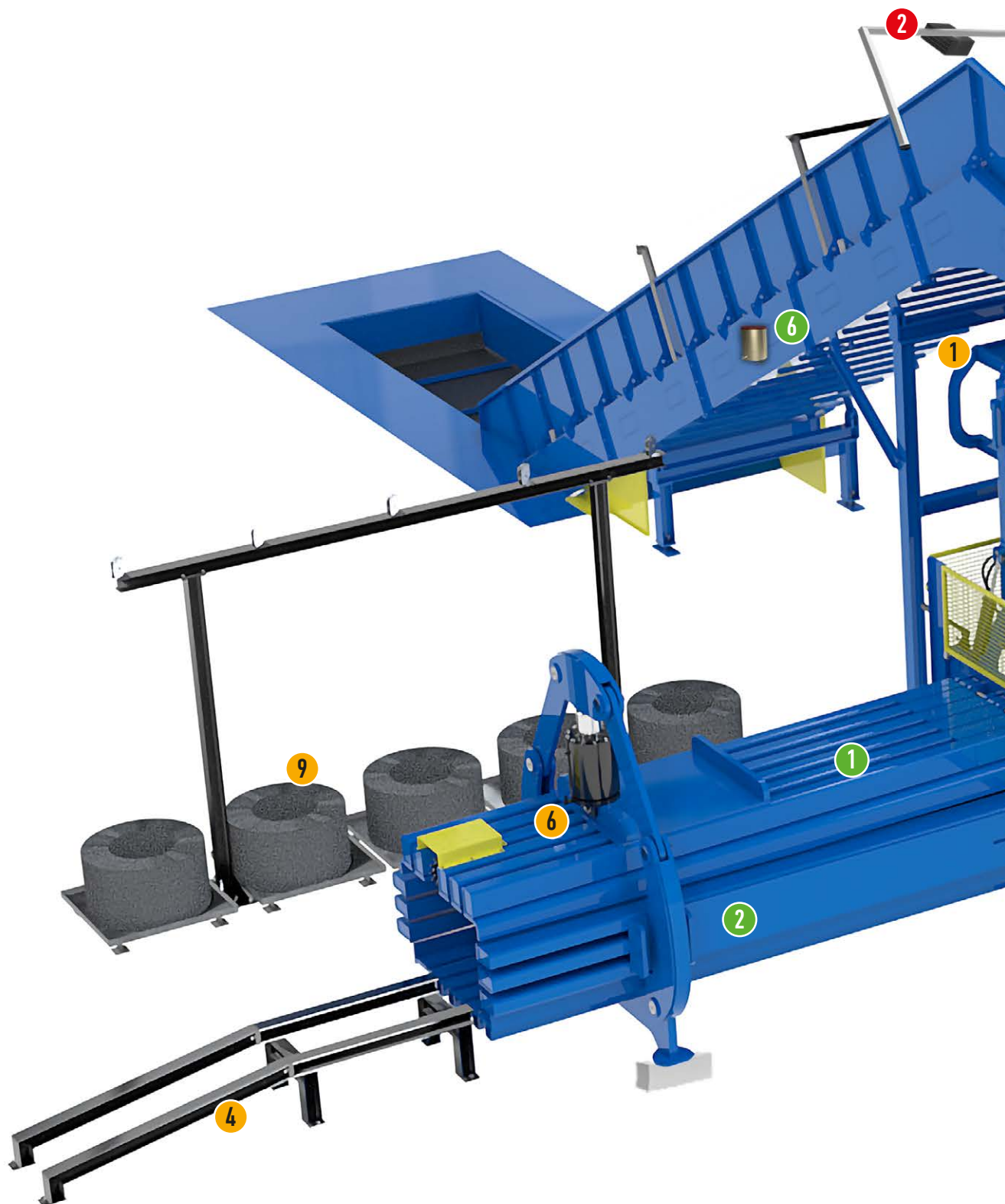
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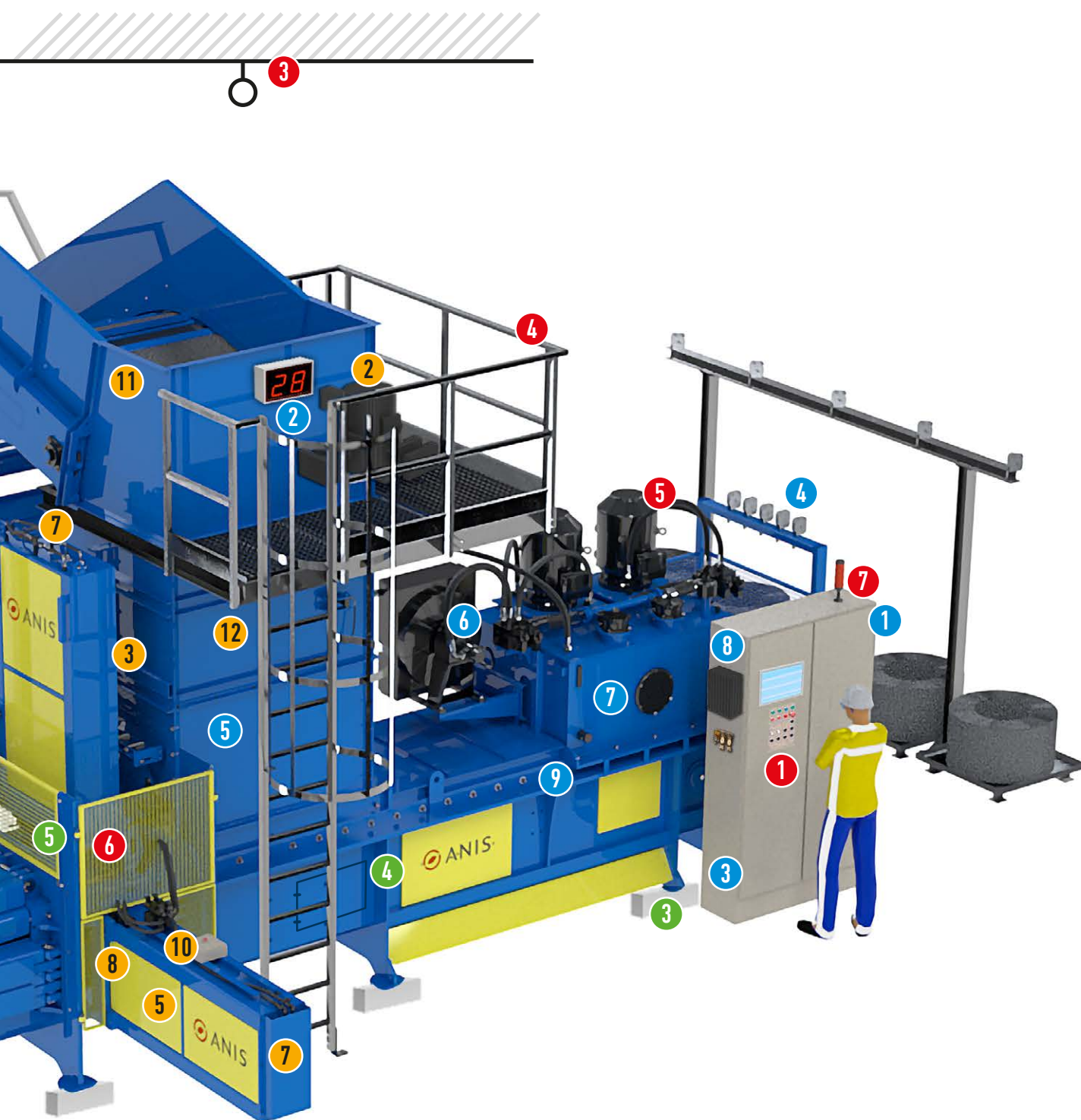
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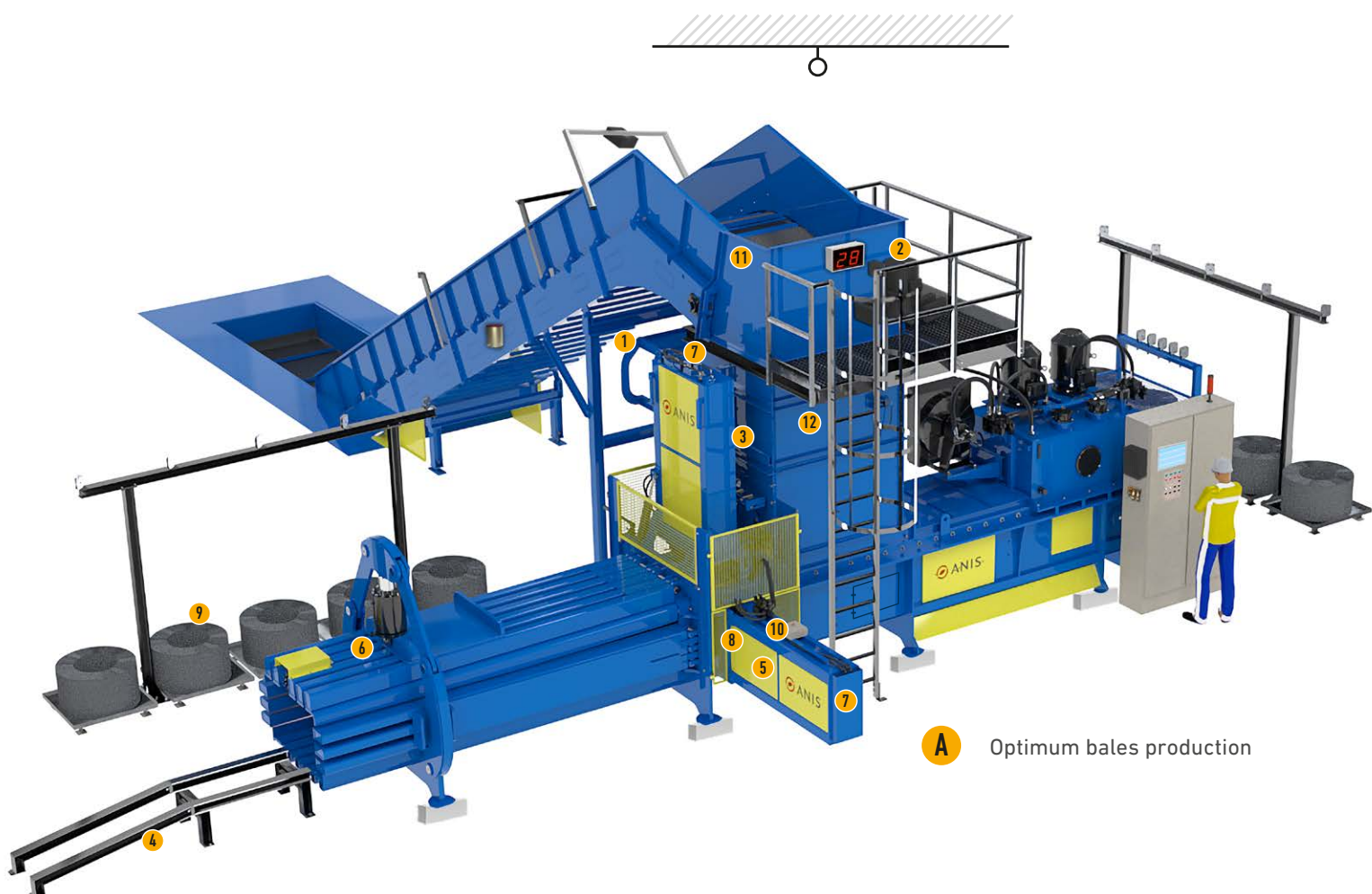
# Overview of Baler's Accessories







- A** Optimum bales production
- B** Safety at work
- C** Optimal baler management
- D** Easier baler maintenance



**A** Optimum bales production

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# A. ACCESSORIES FOR OPTIMUM BALES PRODUCTION

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The balers can be incorporated with accessories that optimize bale production

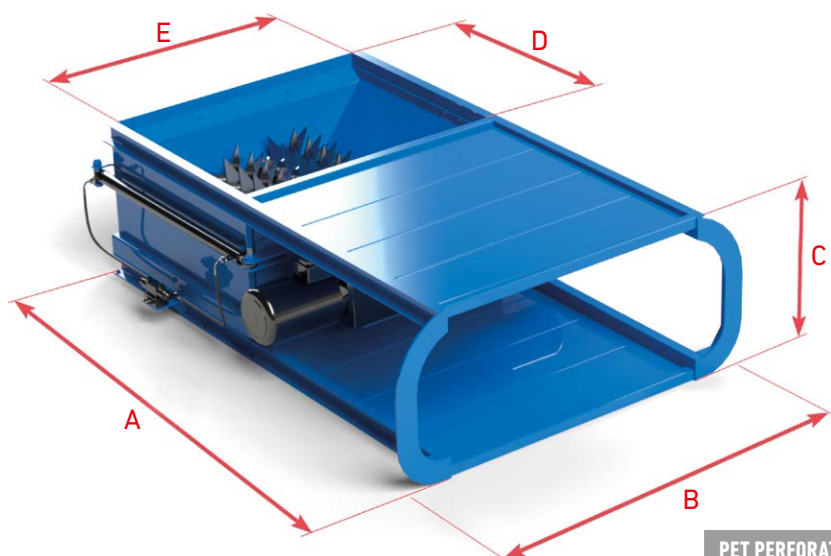


## A.1. BOTTLE PERFORATOR

The perforator for PET plastic bottles punctures and extrudes the air from the bottles for high-density, heavier and the homogeneous bales which lowers transport costs and prevents tie wire cracking. It is mounted as a section on the feed hopper and hydraulically moved to the side, if necessary.

- Consists of two force-locked spiked rollers rotating in opposite directions with various speeds.
- Most suitable for pre-conditioning of PET bottles and plastic containers before baling.
- Applicable for all systems using an underframe and hopper with a conveyor belt; can also be retrofitted to existing systems.
- 2 independent rotors with high resistance HARDOX EXTREME steel perforation tips
- Anti-jamming system with shaft mounted on automatic retractable support
- 2 motors of (optionally 2,2kW) or 5.5 kW (one on each shaft) for punching the capacity of 100 up to 200 m<sup>3</sup>/h
- Revolutions: up to 65 rev/min
- Mounted in the baler's feeding chute or optionally as stand alone unit

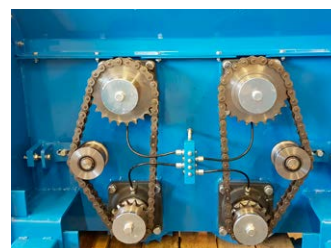




PET PERFORATOR TECH. DATA	UNIT	TWO SHAFT	FOUR SHAFT
No. of knives	No.	2 × 8 (13)	4 × 13
Rotation speed	min-1	48 - 65	48 - 65
Power drive	kW	2 × 2,2 (5,5)	2 × 7,5
Power drive of linear actuator	kW	1	1
Theoretical capacity	m³/h	100 - 200	150 - 200

PET PERFORATOR	Dimensions in mm				
Feed opening in mm	A	B	C	D	E
1300 × 720	1.890	1.781	760	635	1.290
1600 × 1040	2.500	1.855	760	990	1.600
1900 × 1040	2.500	2.020	760	990	1.900
1600 × 1040 - 4 shaft	2.410	1.910	1.060	1.040	1.600

Optionally the PET perforator can be manufactured with 4 shaft for extreme heavy duty conditions.



PET perforator serves to empty, punctures and pre-compress full PET beverage bottles, beverage cartons, small plastic containers before baling.





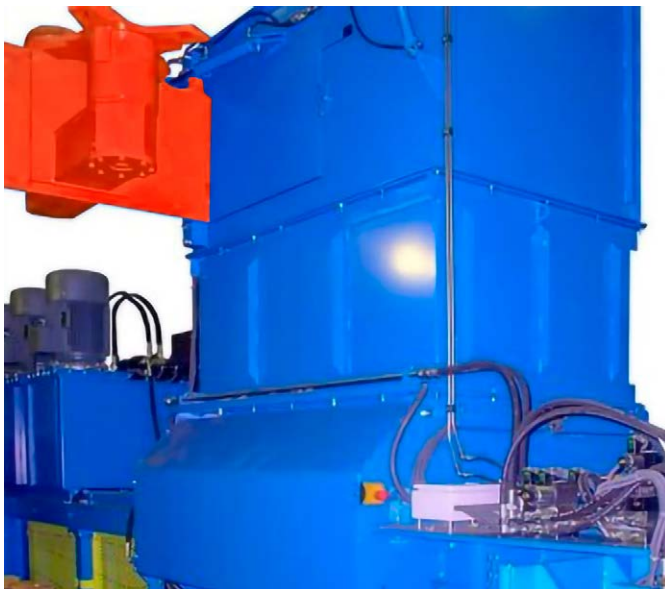
## A.2. RUFFLER (Material Distributor)

The material distributor (often known as a fluffer or ruffler) is retractable and used to break up compacted newspaper or disperse bundled newspaper and magazines in the feed hopper to produce a more uniform bale. It is a rotary blade driven by an electric motor into the hopper immediately above the baling chamber and speeds up the loading into the press chamber of bundled materials which weren't pre-conditioned before baling.

It is moved into the baler hopper through hinged doors and distributes bundled, compacted material, which is extremely difficult to bale, such as magazines, folders, hard cover books, newspapers and coated paper, by means of high-speed rotating.

The ruffler door in the hopper chute is opened automatically. Once the ruffler is inside the baler, the door automatically closes again (motor hydraulic control – 1.5 kW).

The ruffler is equipped with heavy bearings that can absorb any major shock loads. An electro-motor (usually 11 kW) drives the star-shaped disc of the distributor via V-belts. These V-belts protect the motor against peak loads.

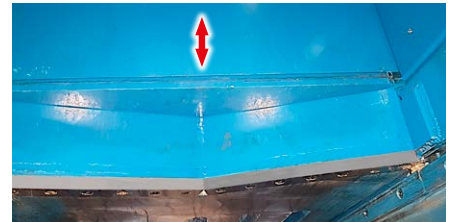




## A.3. STAMPER (Material Blockages Remover)

An unjamming device called a “Stamper” is designed to automatically clear jammed material from in front of the cutting edge, when processing heavy grade material. It is positioned directly above the shear blades for maximum effectiveness and easy maintenance.

- The end positions are scanned via inductive sensors.
- The Stamper with up to 35-tonne pressing force and heavy-duty frame covers the whole ram width and is sufficient for even larger accumulations of material.
- Particularly designed to overcome uneven load during the stroke, which means a high level of strength even in heavy grade materials processing.
- New valve technology for quick response time and speed of operation, allowing short cycle times.
- Cutting-edge stamper innovation includes the appropriate program recipe; the stamper also has a pre-press function



## A.4. BALE EXIT GUIDES

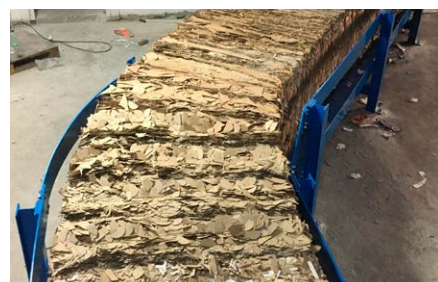
The channel baling press can be fitted with additional modified bale exit devices such as ramps, tracks, rails and tables, for the bales to be quickly removed and stored and ready for transportation.

### Bale exit ramp



### Bale exit track

Bale exit tracks are commonly used to change the direction of bale flow due to various space constraints. In this way, we increase process automation and improve the efficiency. The customized curved bale exit tracks allows the bales to leave building in the controlled manner.



### Bale exit table (90°)

Bale exit table for rectangular (90°) bale shift

The bale exit is equipped with a steel guiding system, with a material thickness of 4 mm.

The partition heights on the bale guides are 300 mm (inside) and 800 mm (outside) respectively.

The bales are led to a bale exit of 90° by means of raised plate segments.

The construction that carries the bale guides is mounted on the floor by wedge bolts.



## A.5. PLASTIC WIRE TYING UPGRADES

A plastic wire tying unit equipped on ANIS balers has been designed especially for plants that produce RDF and SRF bales to be sent to cement factories or waste-to-energy plants. It has been designed for plants that must burn waste because the plastic wire, unlike the metal wire, burns and does not remain as a residue in the oven.

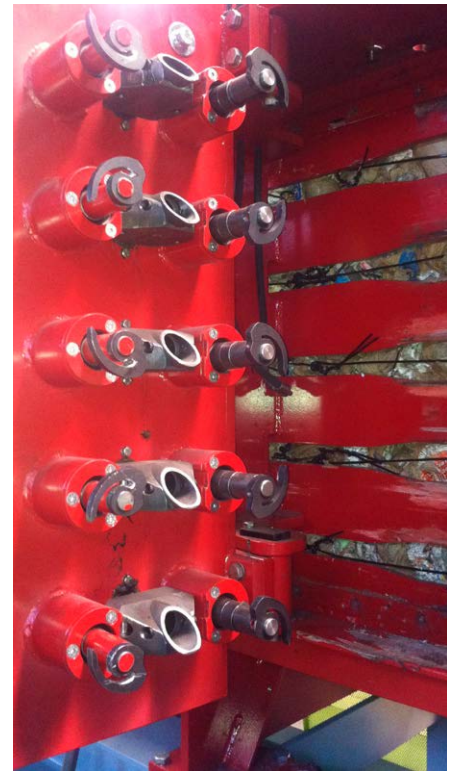
The advantage of the ANIS plastic wire tying system is that it allows tying using both plastic and steel wire, simply replacing the twister hooks and making the machine more flexible. If used at baling and then wrapping bales assures a hermetic external covering as the performed fastening does not tear the covering film.

### PLASTIC WIRE

This is a product of high quality and reliability as it assures automatic fastening with a high resistance to traction. Considering the same section, plastic wire has a higher resistance to traction of almost 40% than steel wires.

This plastic wire has the following sizes:

- Diameter 3.2 mm (for small-medium presses)
- Diameter 4.3 mm (for medium-big presses)

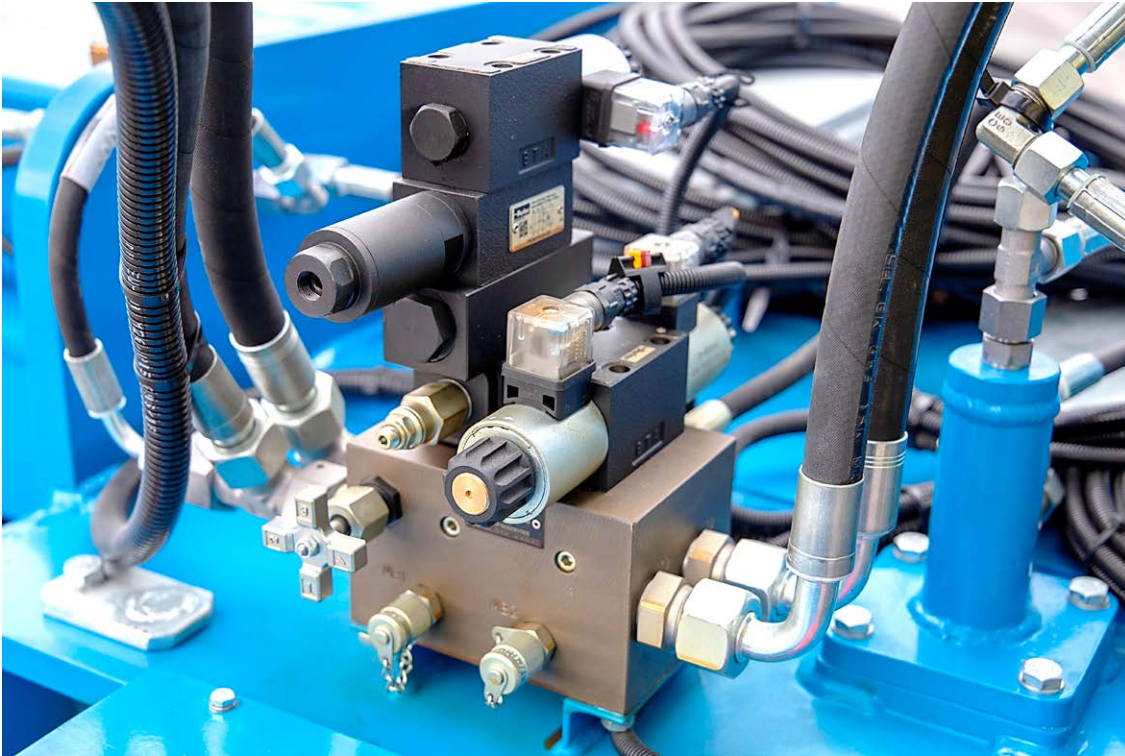




## A.6. BALE DENSITY CONTROL

The balancing density control system automatically monitors and adjusts the working pressure of the press to obtain homogeneous bales with the maximum density, depending on the material to be baled.

Pre-programming is suitable for customers who handle a wide range of materials which are frequently changed and therefore require different optimization parameters. All the operators need to do is select the material to be processed. The intelligent software within the control system determines how much pressure is required in the channel valve to give maximum compaction of material in each stroke.



## A.7. X – CROSSWISE WIRE TYING SYSTEM

To hold the baled material together in uniform bales and obtain the best possible bale weight for expanding materials (in the case of PET, HDPE, foams or foil baling) the cross-tying system baler is recommended.

This means that in addition to the standard five vertical wires, bales can also be knotted/tied with four horizontal wires. As a result, a minimum amount of material drops out of the bale during handling.

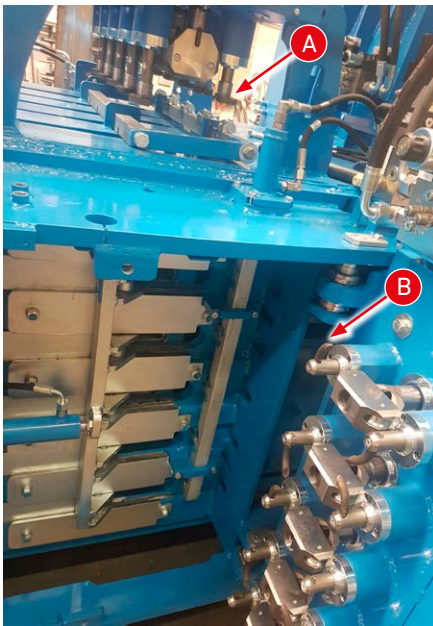
Even difficult material qualities are tightly tied by means of cross binding. This ensures optimal stackability with maximum storage capacity.

Most suitable for balers with:

- 90 to 200 ton pressing force
- Bale sizes 1.100 x 750 mm (max 8 – fold X tying) and 1.100 x 1.100 mm (max 9 – fold X tying)

### Application tips:

Customers often use automatic X- crosswise tying system, for example, by having into horizontal tying unit permanently integrated steel wire (B) while having a plastic wire built into the vertical tying unit (A) and using it only when absolutely necessary.



A: Vertical auto-tier with special twister hooks for plastic wire

B: Horizontal auto-tier with hooks for steel wire

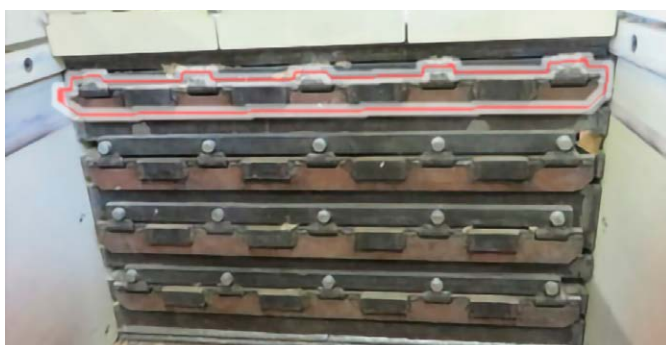


## A.8. NEEDLE SLOT COVERS

This lockable sealing at the needle holes prevents inconvenient protrusion or leakage of fine baled material into critical parts of the channel baling press (especially when baling MSW, RDF or tiny trims) or leaking material from the baler in unwanted places (at the location of the tying device). This guarantees problem-free binding.

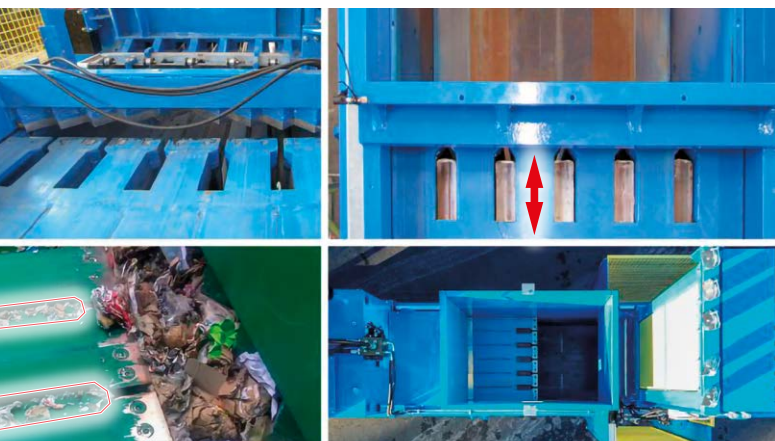
### A.8.1. Secure press ram front flaps (cover caps)

These flaps prevent leakage of fine baled material into the ram slots, thus facilitating the smooth transition of the tying needles.



### A.8.2. Press plate with hydraulic needle slot closure at vertical tying

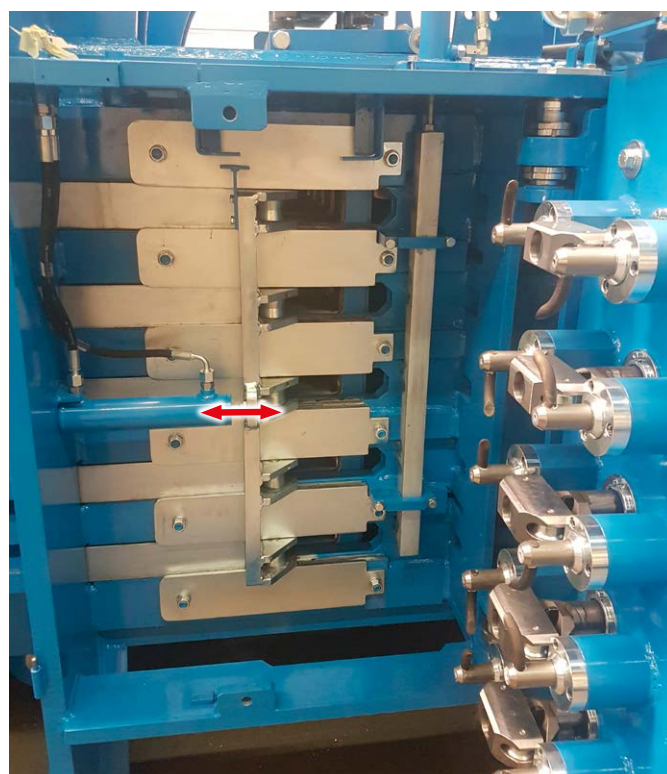
Prevents leakage of fine baled material into the ram slots, thus facilitating the smooth transition of the tying needles. The hydraulically operated sealing of the ram's front side makes it impossible for material to enter the ram. This guarantees problem-free binding.



### A.8.3. Hydraulic Needle slot sliding shield at horizontal tying

Prevents leaking of tiny and soft waste material such as MSW and tiny trims from air conveyor transport from the press in unwanted places (at the location of the tying device)

The tying ports remain closed during the pressing phase in order to prevent discharge of residual material and liquids. The result is a clean working area for the operators and the adjoining plant. The value of protecting side shields lies in longer life expectancy (no pollution of the machine parts), faster servicing and reduced cleaning costs.





## A.9. WIRE COIL HOLDER AND WIRE GUIDE SYSTEMS

Choosing the right system also depends on the baler capacity and frequency of coil changes. Depending on the customers' needs baling presses can be delivered with three different wire coil systems;

- Small coils up to 45kg,
- Big coils up to 800 kg and
- Big coils for plastic wire.

Adjustable wire straighteners are standard for all coil systems. The function of the wire straighteners is to make sure the tying system operates properly.

Inserting the wire is a quick and easy job, the wire guiding is placed well accessible.

### A.9.1. Big Coils System for steel wire (up to 800 kg)



Optionally, the Big Coils System has the possibility to install a **Hydraulic wire tensioner** and **Wire run out control system**.



### A.9.2. Small Coils System for steel wire (up to 45 kg)

Small Coil System is installed next to or on the baler and takes up very little space.



### A.9.3. Big Coils System for plastic wire

Big coil system for plastic wire is a part of »**Plastic wire tying upgrades**«

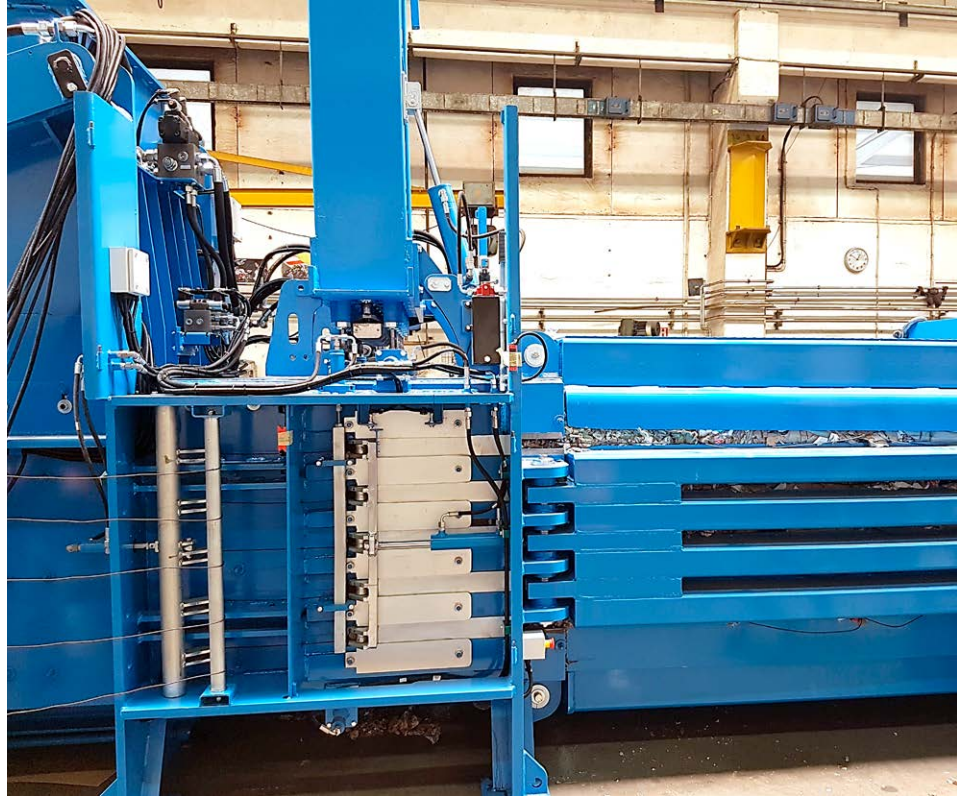
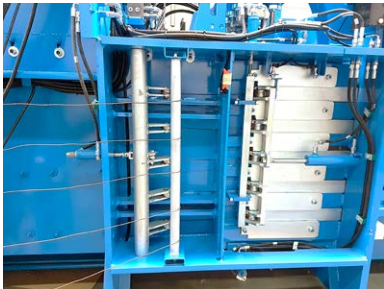




## A.10. HYDRAULIC WIRE TENSIONER

Optionally, the Big Coils wire-loosening system has the possibility to install a hydraulic wire tensioner. With its special hydraulic wire-loosening system provides extremely heavy, homogenous and compact bales.

Hydraulic wire tensioner is especially suitable for baling materials where the probability of wire breaking is high (plastics such as PET, HDPE, foil).



## A.11. FEED HOPPER – EXTRA WIDE

For processing larger-size waste items without pre-processing in a shredder.

In order to deal with the flow of larger pieces of waste that are carried on a wide conveyor belt (2000 mm), the baler can be equipped with a wider hopper (filler aperture), called the wide feeding hopper. The wide feeding hopper is mounted on the filler opening of the baler. This makes it possible to compact even extremely voluminous materials without having to put them through a shredder first.

ANIS can design and supply feed hoppers integrated with shredders, tipping devices, air conveying systems, etc. – to suit all types of material throughput.



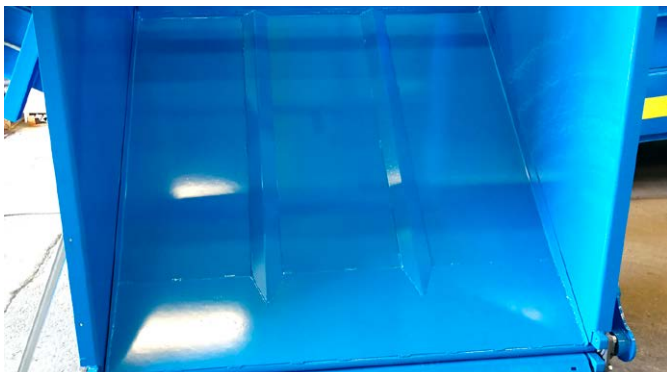
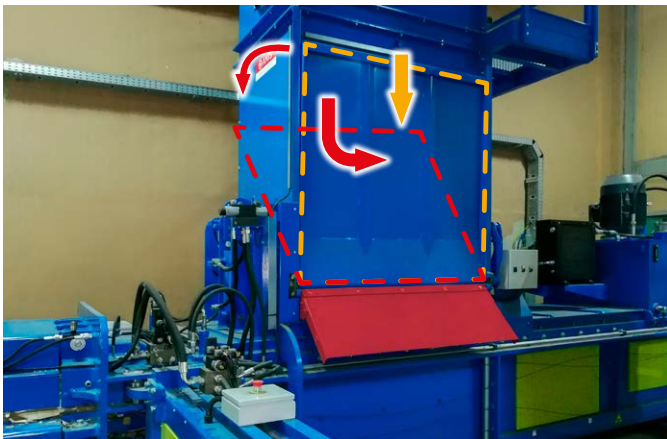


## A.12. FEED HOPPER WITH DIVERTER FLAPS (Bypass Gates)

Diverter flaps are used to divert material from a baler when the baler is under maintenance or faulty to avoid production delays or when the processed material can be shipped out loose. ANIS can design and build diverter flaps to suit customer needs.

Diverter flap cylinders can be driven from the baler hydraulics supply or manually.

ANIS can design and supply feed hoppers integrated with shredders, tipping devices, air conveying systems, etc. – to suit all types of material throughput.

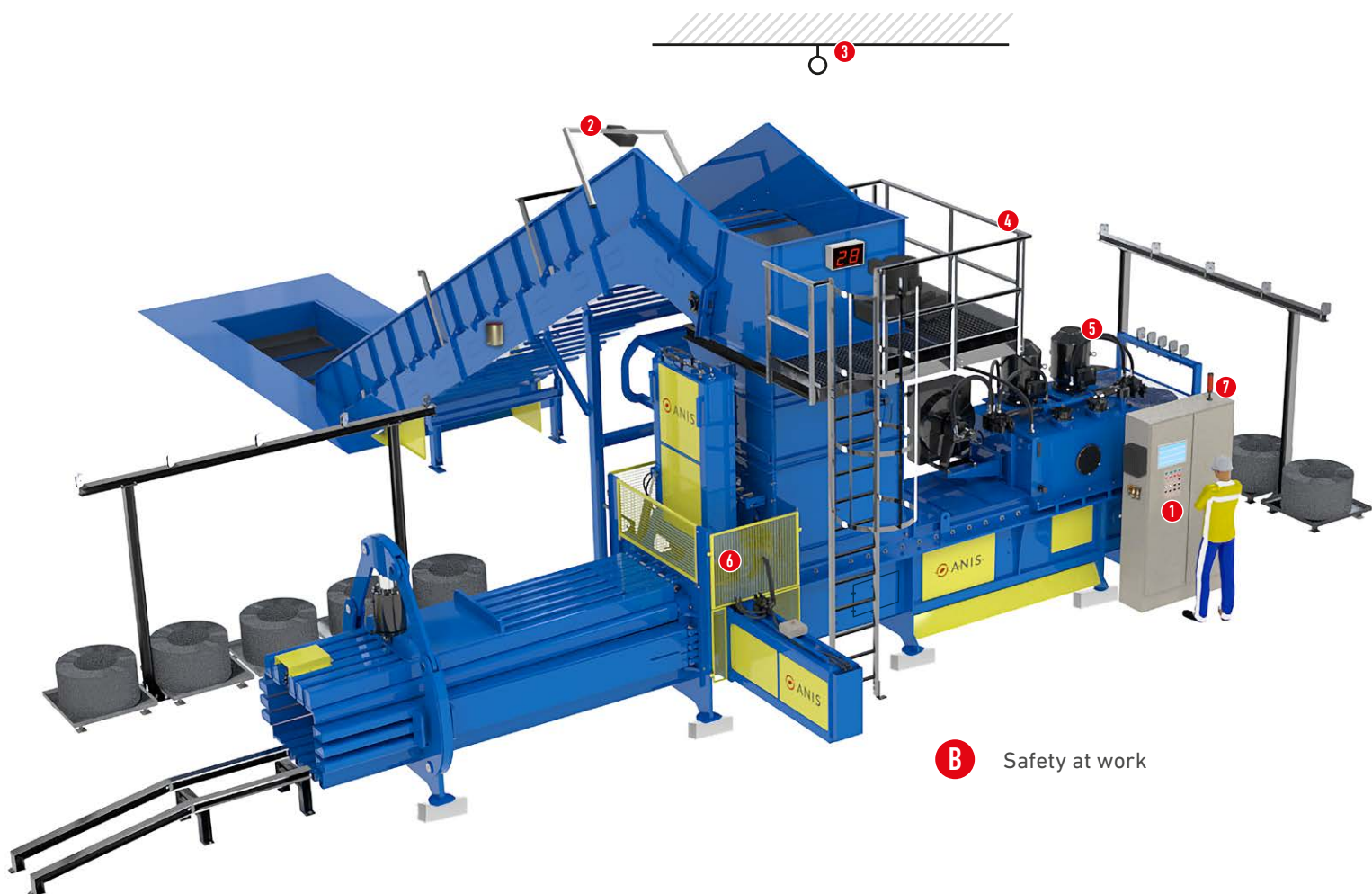


In practice, a conveyor belt installed directly above the feeding hopper is also used to divert the material, which is a very efficient option, but slightly more expensive.









## B Safety at work

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# B.

## ACCESSORIES FOR SAFETY AT WORK

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ANIS balers and conveyors can be integrated with accessories for additional operator's protection



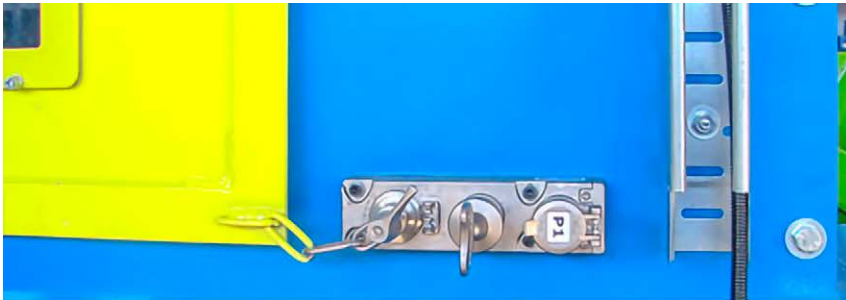
## B.1. TRAPPED KEY INTERLOCKING (Machinery Safety System)

The key-lock security system is designed to provide greater safety of employees during operation compared to the basic standards required by the applicable safety regulations. Only when all keys are locked in the terminal, can the baling press run.

The key-operated inspection door safety lock system (castle-lock) allows safe machine maintenance and cleaning. The safety keys are released only when the electrical control panel is switched off.

Interlocks may take the form of electric switching and/or a mechanical 'trapped key' system fit both types where appropriate.

The feed hopper or press chamber door is equipped with a double safety feature: this door is locked with a second key which must be taken by the employee when entering the feed chute. Only when the employee has left the feed chute and installed the second key, can the door be closed again. Naturally, the baler is equipped with several emergency stop switches and moving parts are protected by covers.



## B.2. PERSONNEL DETECTION SYSTEM ON THE INCLINED CONVEYOR

### Wireless proximity warnings to stop machinery

Recycling company personnel are exposed to the hazards and high risk of working with heavy machinery such as balers and conveyors.

By taking additional precautionary measures ANIS has provided a worker protection system for operating in the various hazardous areas found around the channel baling presses and the conveyors.

This system is designed to complement the safety measures already in place in all conveyor systems and additionally protects personnel against fatal accidents by automatically halting the conveyor belts.

The ANIS CONVEYOR wireless worker protection system is an electronic security system designed to halt a conveyor belt (connected to a security antenna) as soon as a person wearing the signal-emitting tag enters a hazardous area.

#### System description

Channel baling presses are fed by huge conveyor belts. There is a risk that a person falls on it and gets drawn into the baling press. To avoid that, an antenna-module is installed over the conveyor belt, which supervises the whole

width of the conveyor belt. The person carries a safety device, on either their arm or clothes. If the safety device gets into the magnet field, it is immediately detected, and the system stops automatically.

#### Advantages:

- improves overall security and creates safer working practices for staff
- offers personnel the greatest possible protection through the machine stop system, which will operate regardless of employee's awareness
- the system complies with international safety standards (EN 16252: 2013).
- can be installed on new and existing devices
- all settings can be adapted to specific customer situations and provide a tailor-made solution for protecting hazardous areas
- simplifies your security system with a single system for conveyors, balers and shredders





## B.3. THE FALL PROTECTION SYSTEM

The system prevents falls when working in hazardous areas, but it is also responsible for stopping the machine's operation after a worker has fallen, to avoid even greater risks.

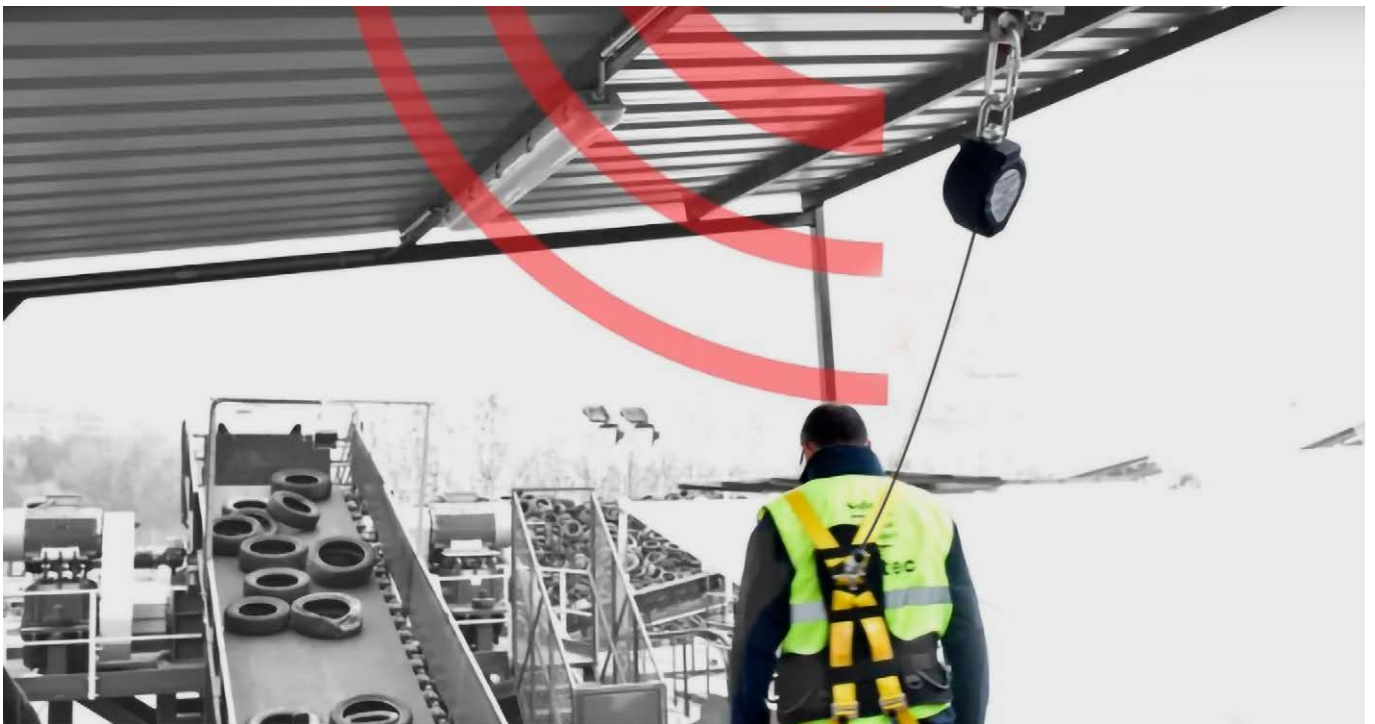
This is a retractable safety device which is anchored to a fixed element and connected to the worker with a safety harness.

When a fall occurs, the harness becomes taut and the Fall Protection Device detects this tension.

This device is also responsible for sending the stop signal to the plant machinery, causing a quick halt in the functioning of the machine.

The device must be connected to the fixed mooring point by means of the bearing swivel and the connector. Naturally, the fixed clamping point must be located above the user so that the force of gravity of the fall itself causes the desired effect of generating the sudden tension in the harness. In addition, the connection must have a minimum static resistance of 12 kN.

The shape and structure of the fixed clamping point should be enough to prevent the device's automatic disconnection and slippage. The use of marked and certified fixed mooring points is recommended, according to the European standard EN795.



Anchor point



Fall protection device



Retractable steel cable



Safety harness

## B.4. INSPECTION PLATFORM

ANIS can design the maintenance platforms according to customer's requirements allowing personnel to reach some plant areas in a safe and efficient manner.

Maintenance platforms allow safe access to the hopper inspection door and to the gear box of the conveyor belt and can be incorporated as part of the machine supply.



## B.5. PROTECTIVE SOUND COVER

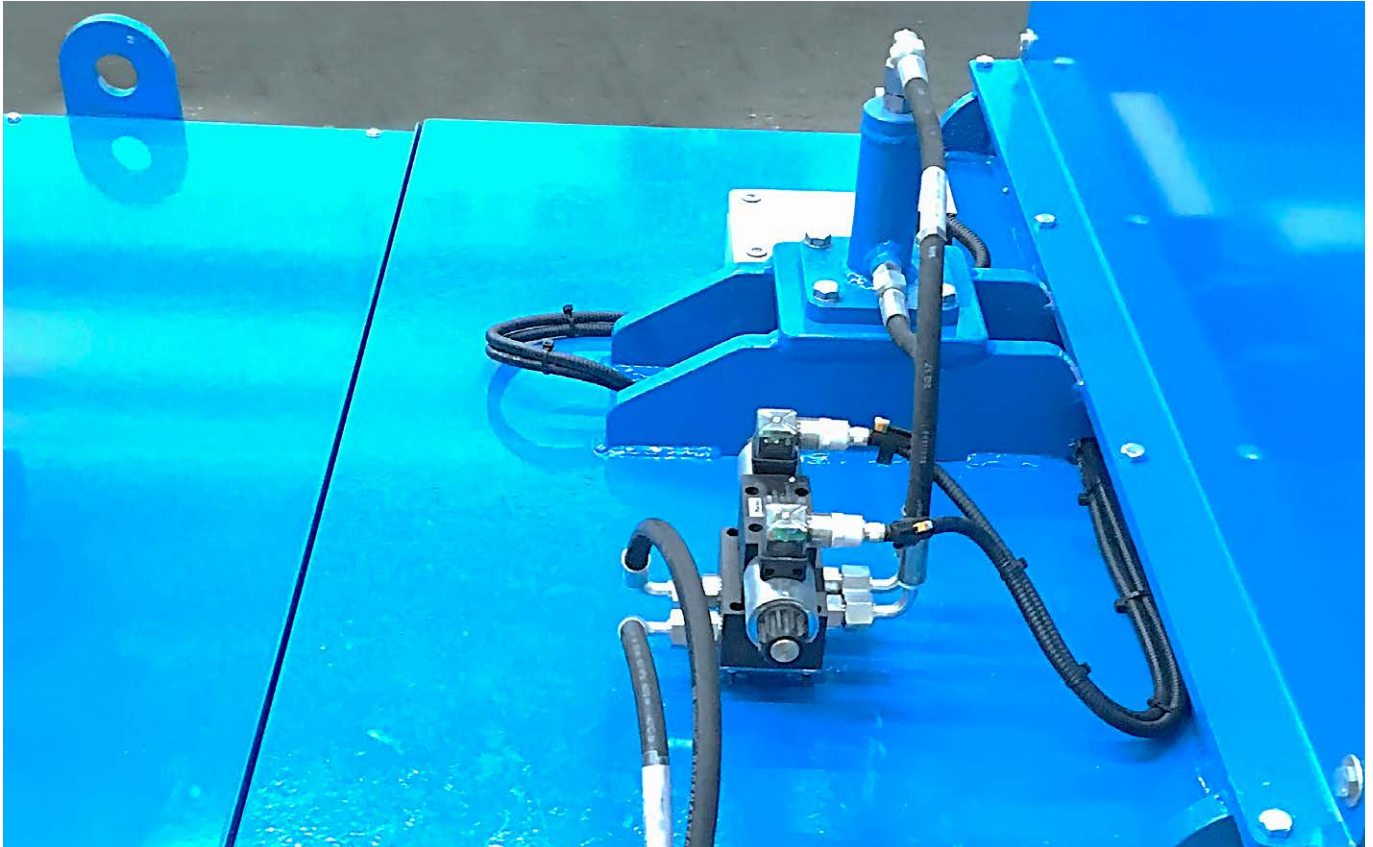
Protects the driving unit against dirt and dust and reduces the noise level when the baler is operating.





## B.6. SECURE PRESS RAM LOCKING BOLT

- Increases operational safety during wire tying, e.g. if there is a power cut
- Prevents the press ram being pushed back during bale tying at emergency-stop or loss of power
- Prevents bending of the wire insertion cylinders (needles)



## B.7. HORN OR LED SIGNAL TOWER WITH BREAKDOWN ALARM

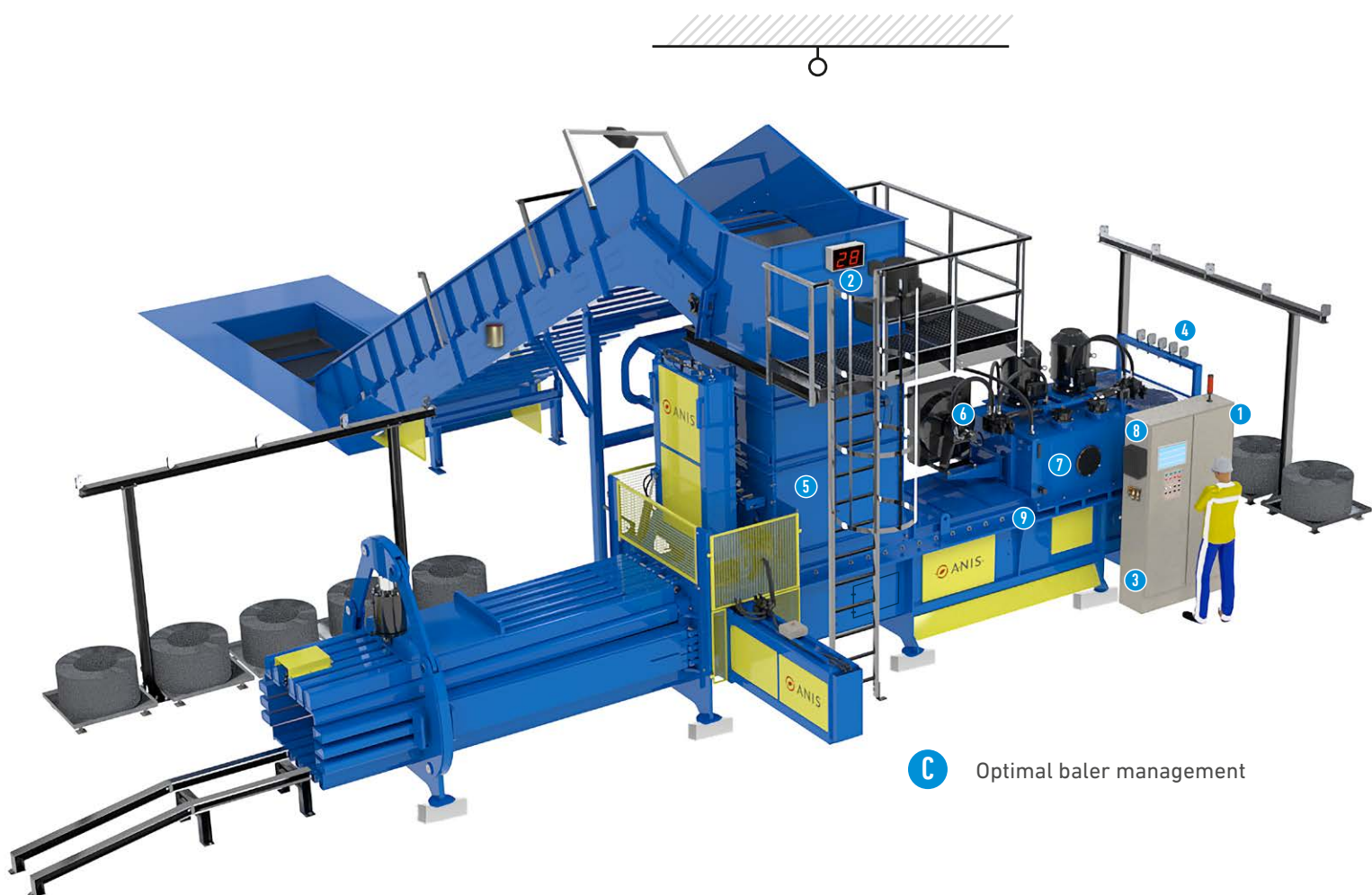
The baler comes standard with a sound and light alarm signal that is operative when the baler is turned on (95 dB long pulsating signal).

The baler can be provided optionally with a sound and light signal that also comes on when the baler suffers a breakdown (95 dB short pulsating signal).









**C** Optimal baler management

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# C. ACCESSORIES FOR OPTIMAL BALER MANAGEMENT

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We can integrate our balers with accessories that improve baler handling

# C.1. CONTROL SYSTEM

The ANIS standard supervision system consists of a Siemens PLC programmable controller with a control panel. It is designed to operate and monitor the baling process and is equipped with a built-in diagnostic fault detection system for counting the number of bales and setting the machine parameters (such as pressure, bale length, temperature, number of bales and material selection) according to the material to be processed.

Operators only need to select the material grade to be processed. The embedded program recipe system chooses the correct machine parameters to produce the best bale possible.

All material alarms are also data- & time-stamped and logged.

## C.1.1. ANIS remote assistance can also be incorporated via Ethernet connection as an option:

- For external communication and data transmission
- As a training device
- Enables long-term continuous baler operation and minimize maintenance costs
- External baler process monitoring via the SCADA system
- Remote troubleshooting and software updates by Siemens STEP 7 via internet modem

## C.1.2. Special Program recipes

- Special programming to reduce bale-length difference
- Special programming for low-density materials
- Special programming for high-density materials (paper)
- Special programming for stamper detecting
- Special programming for expandable materials
- Special programming for maintenance





## C.2. LARGE DIGITAL DISPLAY

ANIS can integrate an additional large digital display into the baler to show bale-length and error-control indications. This option is useful in cases where the operator cannot be close to the machine all the time but wants to maintain control over bale length.



## C.3. VARIABLE FREQUENCY DRIVE – FREQUENCY INVERTER

High power only when it is required

In order to save energy ANIS has developed a solution with frequency-controlled hydraulic drive which makes it possible to even further reduce energy consumption when the baler is waiting for material and when less power consumption is needed.

It enables operating in energy-saving motor drive mode which can save energy compared to the standard drive.

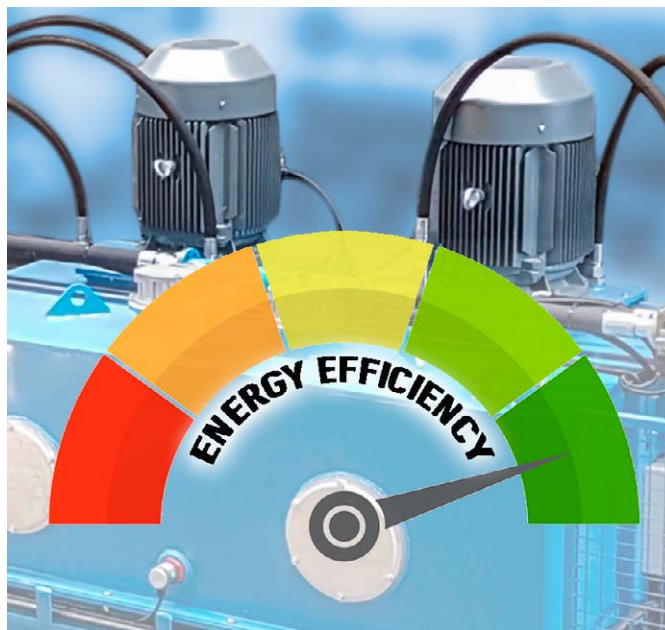
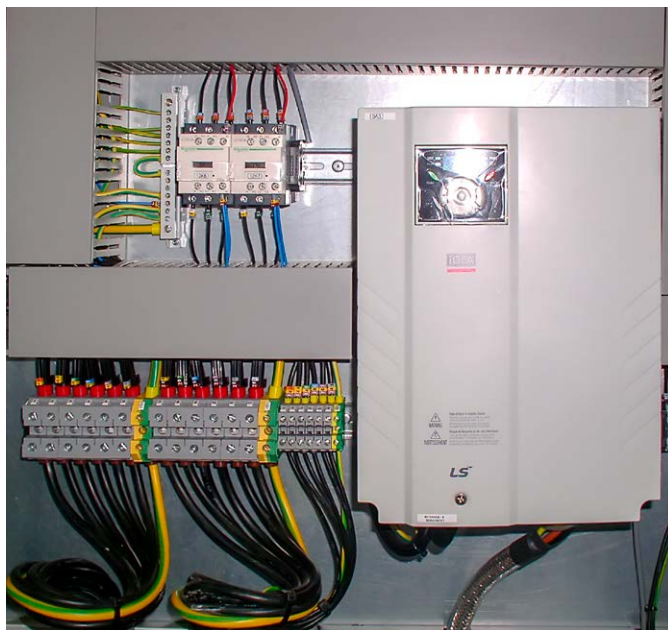
### Soft start on request

It is possible to provide the main electrical motors with a soft start starter to gradually power the motors avoiding shocking start-ups and sudden changes in voltages.

### VARIABLE FREQUENCY CONTROLLED DRIVE:

Energy savings of up to 40% compared to the standard drive

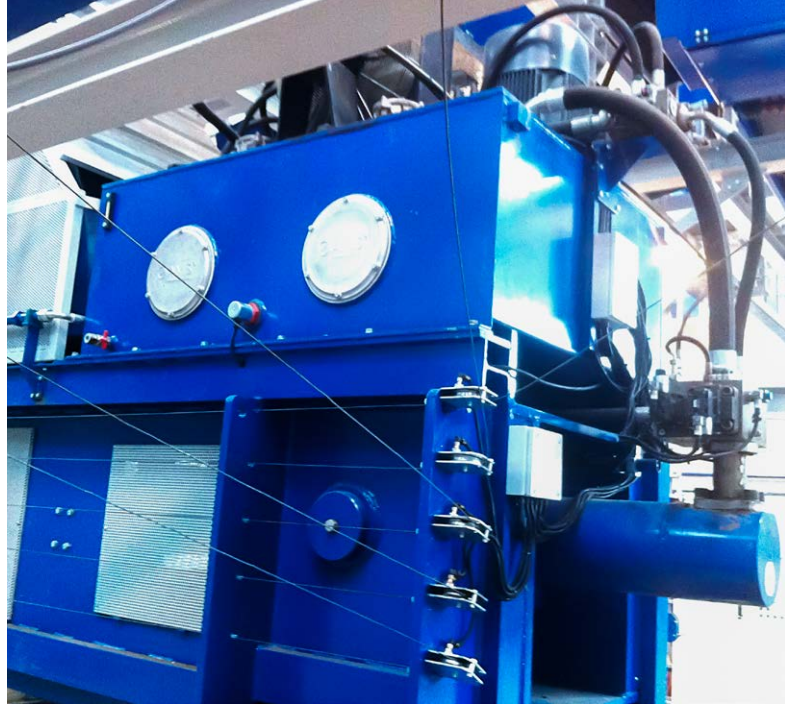
- High throughput thanks to load-dependent speed control





## C.4. WIRE RUN OUT CONTROL SYSTEM

Optionally, there is a possibility to install a wire run out sensors. An automatic wire break monitor indicates broken wire, run out wire or wire end on the control panel.

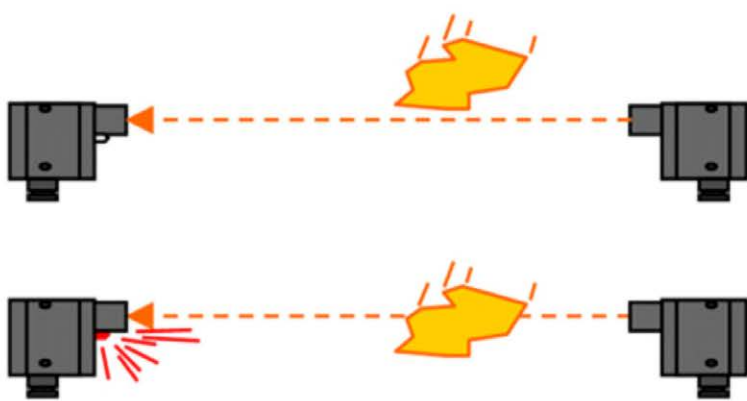


## C.5. PHOTO-ELECTRIC CELLS

All ANIS balers are supplied as standard with 2 sets of photo-electric cells, which are mounted in the hopper chute. The photo-electric cells detect the height that the material will reach, as a result of which the compaction cycle gets commences.

Depending on the type of material that is to be compacted, filling takes place on the flap or on the bottom: heavy material, such as magazines, is filled on the bottom, and light material such as cardboard, on the flap.

It is possible to install an extra set of photo-electric cells.





## C.6. OIL COOLER

The hydraulics power generator is equipped with an oil cooler (3 kW) that prevents the oil from becoming too hot.



## C.7. OIL HEATER

The hydraulics power generator is equipped with an oil heater. The heating element switches on automatically when the oil temperature gets too low.

If the baler is equipped with this oil heater, separate power supply will be needed of 220V – 50 Hz.

Cartridge screwed-in heaters for pre-heating of hydraulic oil on mineral oil base.

Output . . . . . 2.450 W

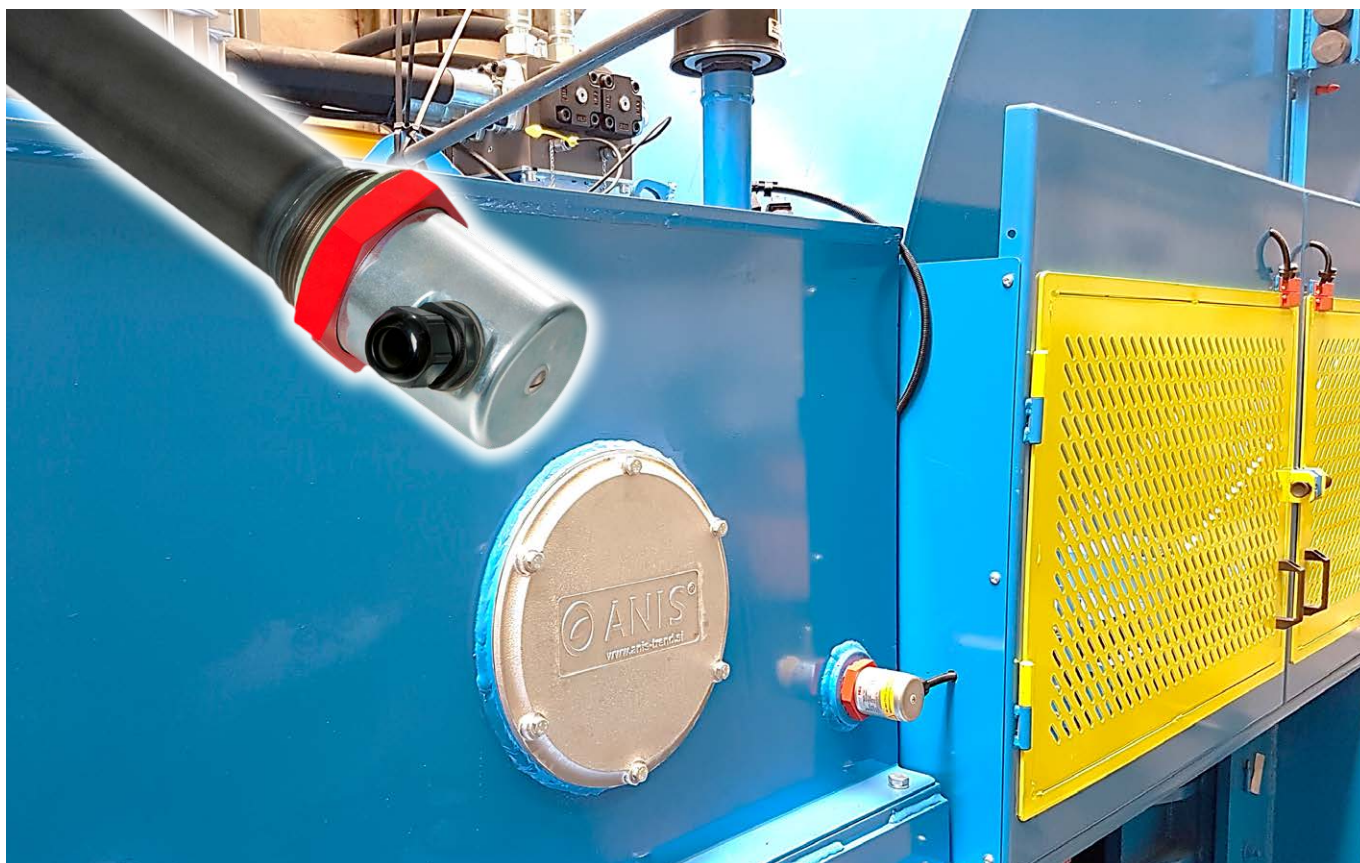
Heating element . . . . . 230V/50Hz

Surface charge . . . . . 1.5W/cm<sup>2</sup>

Immersion depth . . . . . 1.000 mm

Protection class . . . . . IP 65

Exchangeable ceramic heating insert (mounting / dismounting possible without oil drain)





## C.8. THERMAL MANAGEMENT OF ELECTRICAL CABINET

Thermal management devices are used to maintain optimum temperature conditions inside an electrical cabinet to prevent component failure due to overheating and/or condensation. This selection of air conditioners, heaters, venting fans and control units provide efficient and cost-effective climate control to protect investment in a baler and infeed conveyor.



### C.8.1. Enclosure Fan Heater



In a cold environment (i.e. Scandinavia) we advise the use of a Enclosure Fan Heater. The electric/electronic components or PLC will work at temperatures of 0° and higher. At lower temperatures, condensation can lead to corroded switches. This fan forced enclosure heater reduces the risk of corrosion and provides an evenly distributed interior air temperature in enclosure. The fan heater can be turned on and off by way of a thermostat inside the electrical cabinet.

Enclosure Fan Heater output power is usually:

- 400 W which controls balers and infeed conveyors especially with inverter drives.
- 250 W which controls balers with less electro motor power

### C.8.2. Filter Fan for Electrical Cabinet

Filter fans are often the simplest and most cost-effective way to remove heat from an electrical cabinet. If the surrounding air is cooler than the temperature that must be maintained inside the enclosure, a filter fan can be an excellent option. Filter fans provide clean cooling air and



help prevent intrusions of dirt and other contaminants that could damage sensitive electronics, while pulling cooler air into the enclosure and removing hotter air.

Filter fans are suitable for electrical cabinets located in areas with temperate climate (i.e. Central Europe).

### C.8.3. Air-conditioned Electrical Cabinet

Enclosure air conditioners are designed to maintain a set temperature inside the electrical cabinet, ensuring a contaminant-free environment and protecting electrical/electronic components from overheating in harsh environment. Air conditioners are suitable for electrical cabinets located in areas with hot climate (i.e. Middle East) especially when equipped with inverter drives and soft start units with high operating voltages and cooling capacities.





## C.9. RAT PROOF CABLING

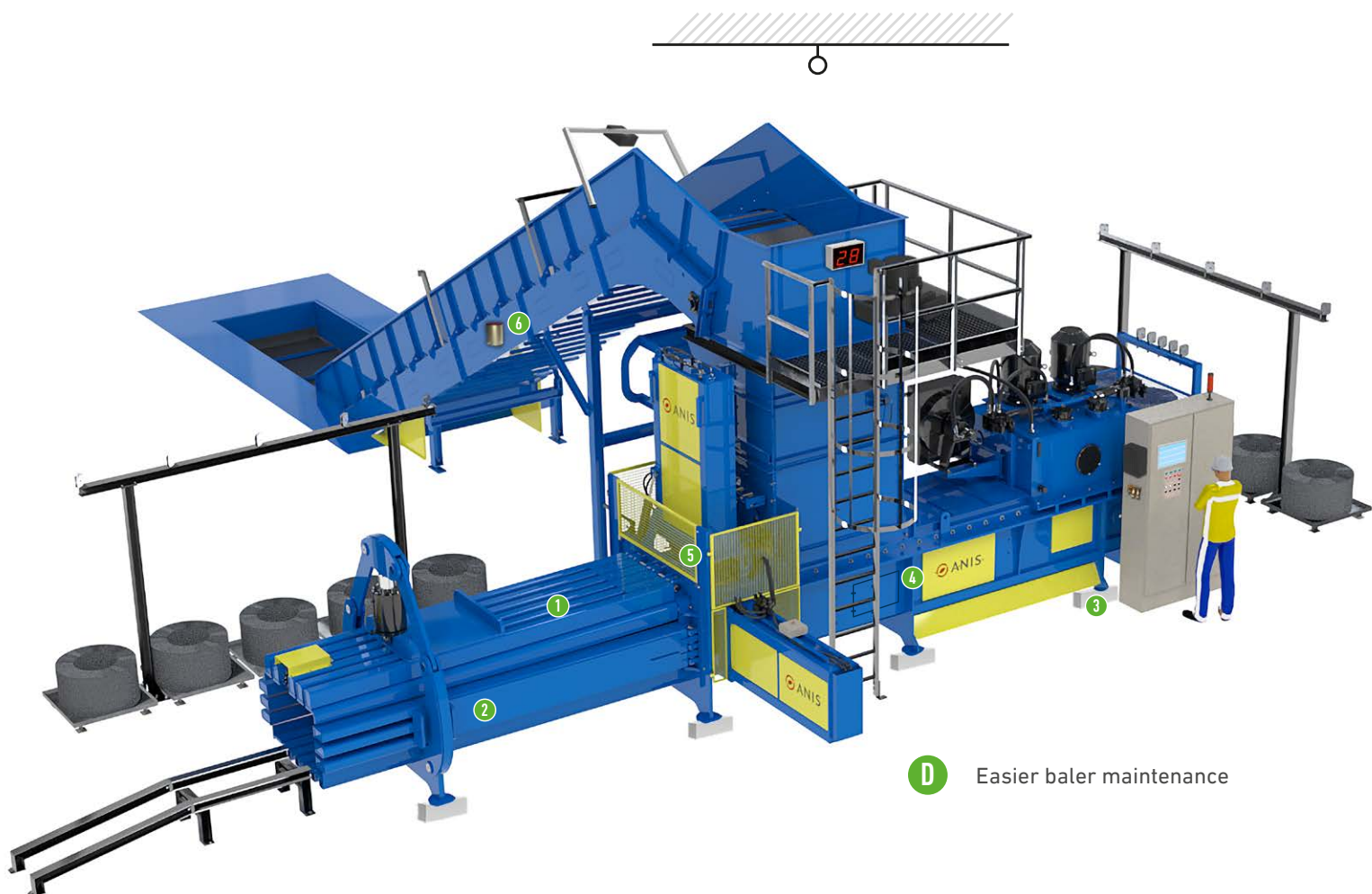
The electrical cables of the baler are protected in a steel-reinforced conduits plastic coated flexible tubing as a protection against rodents. The counter-lock structure provides a powerful tensile resistance, hard to break and deform and manages high flexibility.

Also, when it is possible the cable channel is open and mounted upside down preventing rodent damage.

Electrical cables are protected in steel conduits plastic coated flexible tubing.







**D** Easier baler maintenance

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# D.

## ACCESSORIES FOR EASIER BALER MAINTENANCE

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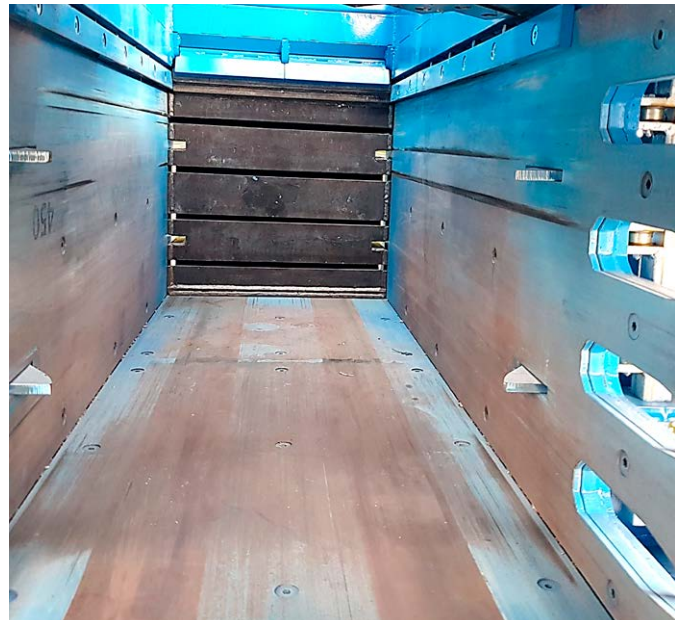
We can integrate our balers with accessories that improve baler handlin

## D.1. SPECIAL BALER'S SURFACE TREATMENT

When processing very abrasive and hard-wearing materials the side walls of the press and the press channel floor, lid and sides can be additionally equipped with:

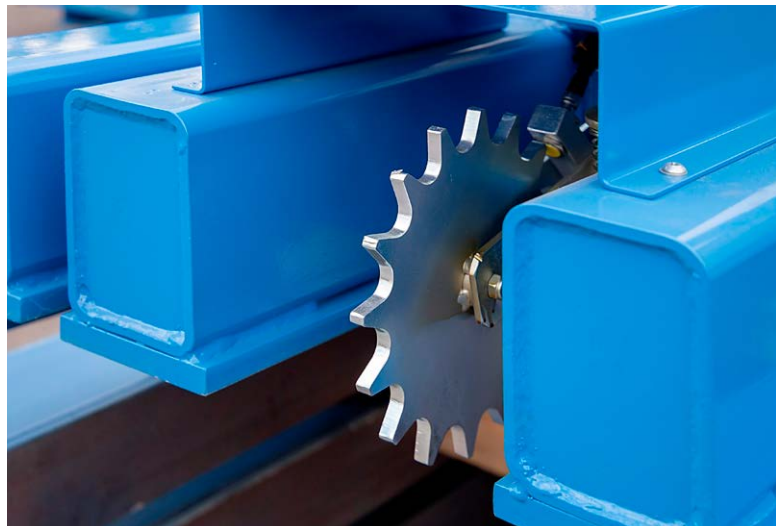
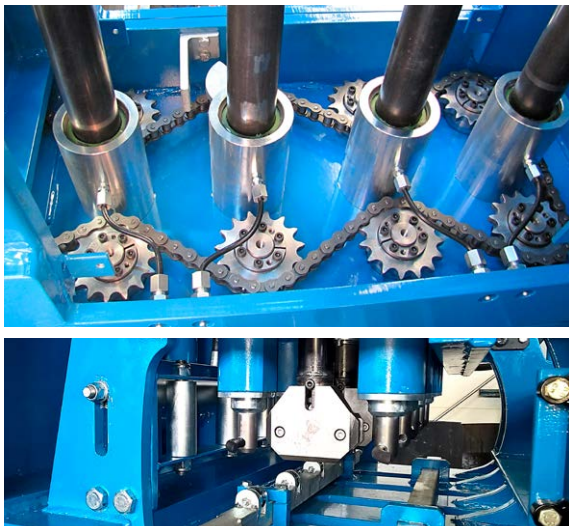
### D.1.1. Bolt-in HARDOX® wear plates made of wear-resistant steel

- To extend equipment life (up to 4 times longer lasting than standard steel)
- The wear-resistant system protects the baler from abrasion and corrosion
- Bolt-in system enables rapid replacement and minimizes baler downtime
- Fully lined for durability and easy maintenance



### D.1.2. Hot-dip galvanized critical parts

- a series of special measures protects the baler from corrosion caused by the organic fraction of waste





## D.2. PROTECTIVE FINISH (Standard /Extra Painting)

The equipment / installation is finished with a two layers paint system.

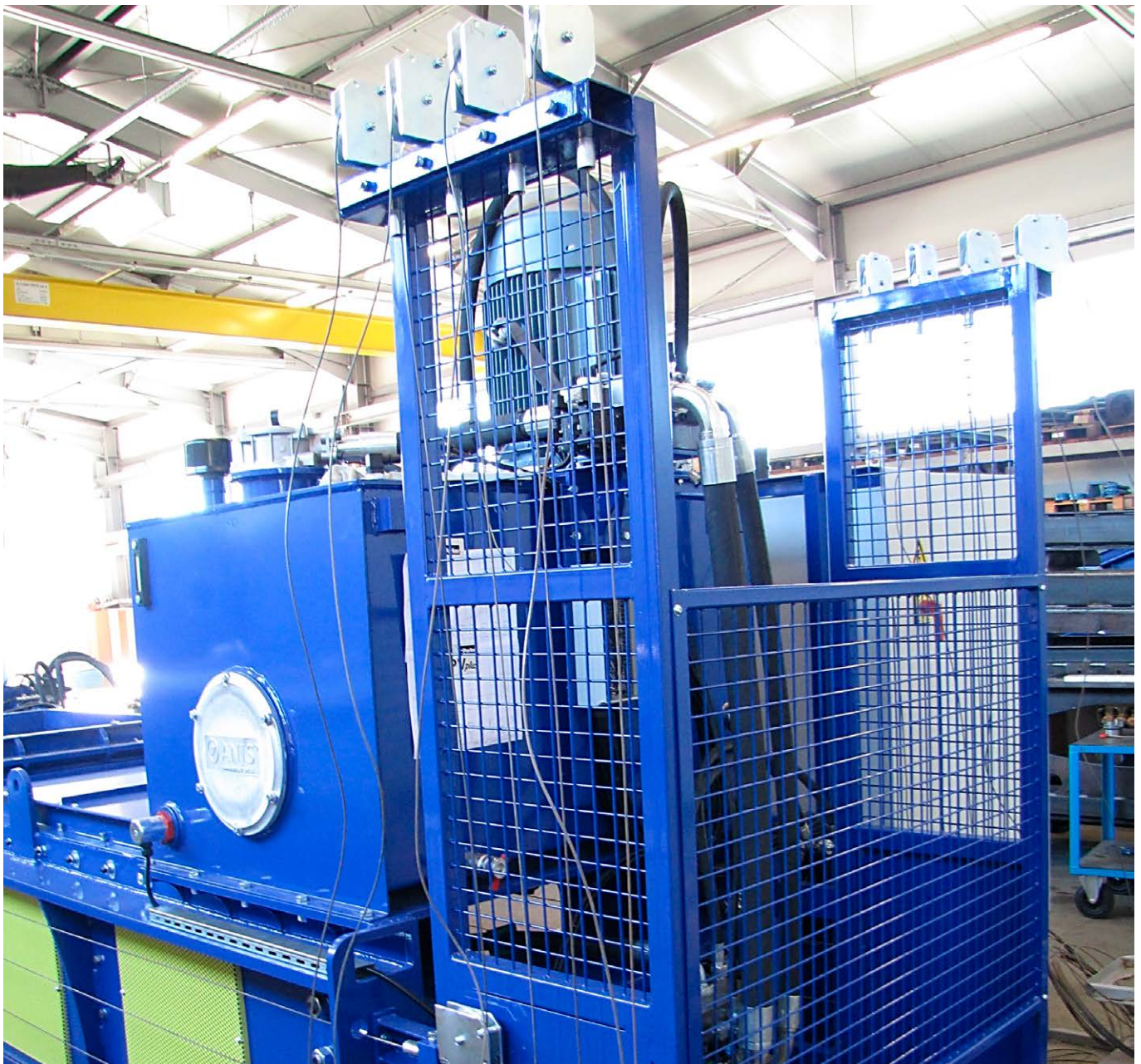
All surfaces degreased and mechanically cleaned / sandblasted to give a perfect surface finish for the paint system.

The first coat is a corrosion-resistant primer zinc-phosphate. The second layer is a durable silky gloss two compound paint (RAL 5015 –blue). All guarding etc. is painted yellow (RAL 1016).

The dry film thickness is an average of 75 microns. Standard components such as, side panels of conveyors are given a preliminary coat of a primer paint then a final paint finish of at least 75 microns thick. Other unpainted parts, such as exposed shafts etc., are treated for transportation / storage etc. with a corrosion resistant protective finish ie.: Grease, oil or a Vaseline spray.

Some critical parts are hot dip galvanized to protect the baler from corrosion caused by organic fraction of waste.

**Optionally the painting is possible according to the customers requirements.**





## D.3. BALER BEAMS – SUPPORT LEGS

The baler can be fitted with additional beams to raise the machine above the floor to eliminate the need for a needle pit and for easier cleaning and access under the baler or when using the bale wrapper for further waste processing.





## D.4. MAINTENANCE DOOR AT THE PRESS CHAMBER

- Large, wide-opening safety and easy maintenance doors on both sides of the press chamber for best accessibility for all regular maintenance and cleaning of the press box
- and easier inspection work and maintenance for wear pads and rollers
- These doors are dimensioned to allow the passage of a man.
- In addition, they are doubly secured by a double contact and a trapped key interlocking safety system for optimal security.



## D.5. FOLD-DOWN MECHANISM

The needle installation that applies the wires around the bales can be hydraulically folded down and moved back into a vertical position, by a manual pump and cylinder. This is for the purpose of maintenance.

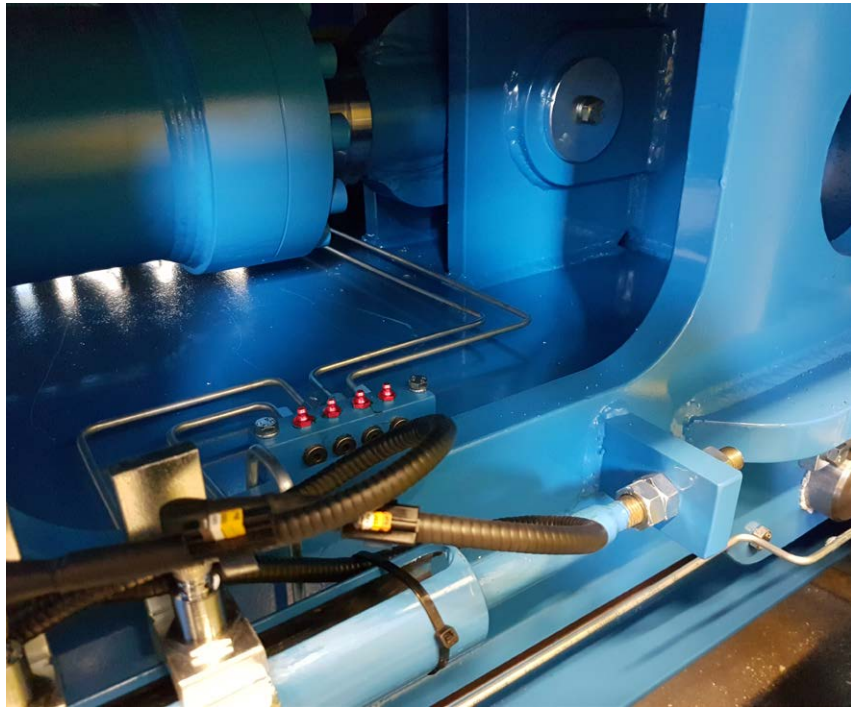
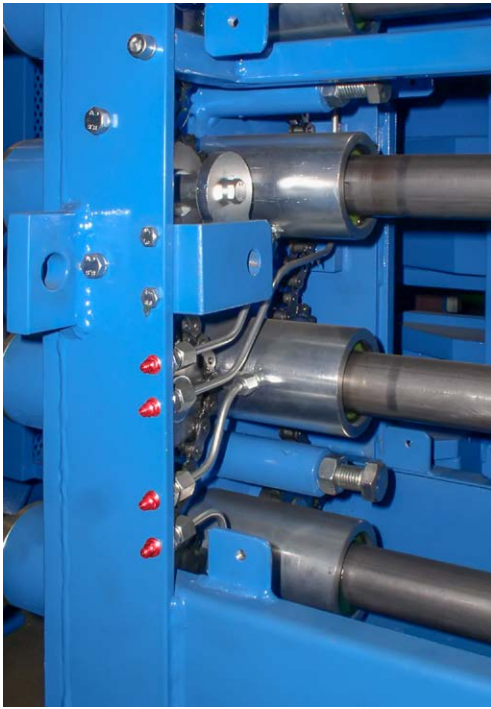




## D.6. LUBRICATION SYSTEM

### D.6.1. Grouped nipples lubrication systems

Some components such as the bale press ram or tying unit can be equipped with a grouped nipples lubrication system for easy maintenance but it still uses manual lubrication performed by the operator.



### D.6.2. Automatic lubrication systems

The automatic lubrication systems supply either grease or circulating oil to components requiring lubrication with the correct amount of greasing media.

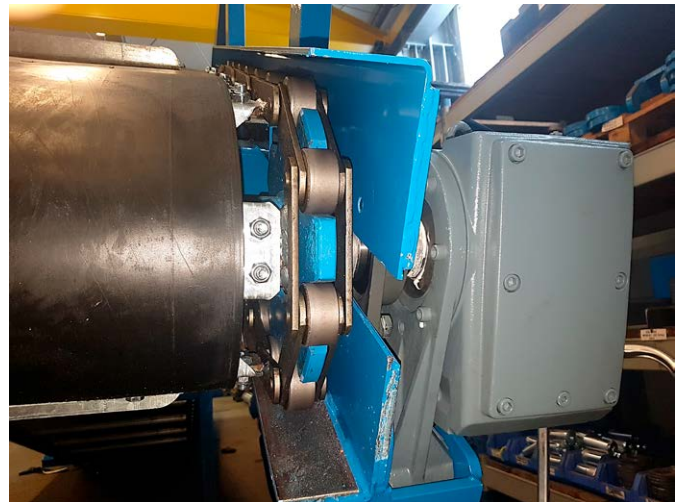
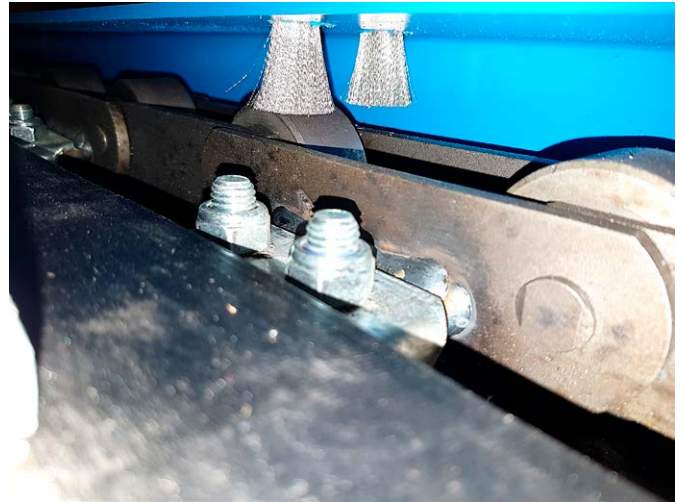
There are many advantages in using automatic lubrication systems, including:

- Improved machine reliability
- Reduced machinery downtime for lubricant application
- Improved overall lubrication of machinery
- Reduced cost of lubricants due to efficient use
- Reduced labour cost for lubricant application
- More efficient use of lubricants
- Reduced lubricant waste through controlled consumption
- Potentially cleaner plant facilities and machinery due to reduced spills
- Replaces manual supply and reduces service requirements
- All important lubrication points are supplied continuously with lubricant and hence are less prone to wear
- Long maintenance intervals

### D.6.2.1. AUTOMATIC CENTRALIZED OIL LUBRICATION SYSTEM FOR FEED CONVEYOR

Chain and sprocket oiler at feed conveyor lubricates chains and sprockets to eliminate having to manually maintain equipment during critical working periods. Oil is pumped to the system's brushes, which clean debris off equipment chains and disperse the oil to pin bushing joints. The oiler applies oil while the chain is warm and running, consistently oiling to minimize metal-to-metal contact and cool equipment parts.

Key features and benefits: increases chain life by 3 times; fully adjustable pump allows modification of dispensing rate and assures that all chains and sprockets are properly oiled regardless of climate or condition; eliminates chain stretch





### D.6.2.2. AUTOMATIC CENTRALIZED GREASE LUBRICATION FOR COMPLETE SYSTEM (BALER & FEED CONVEYOR)

This system is designed to lubricate the complete baler and its feed conveyor

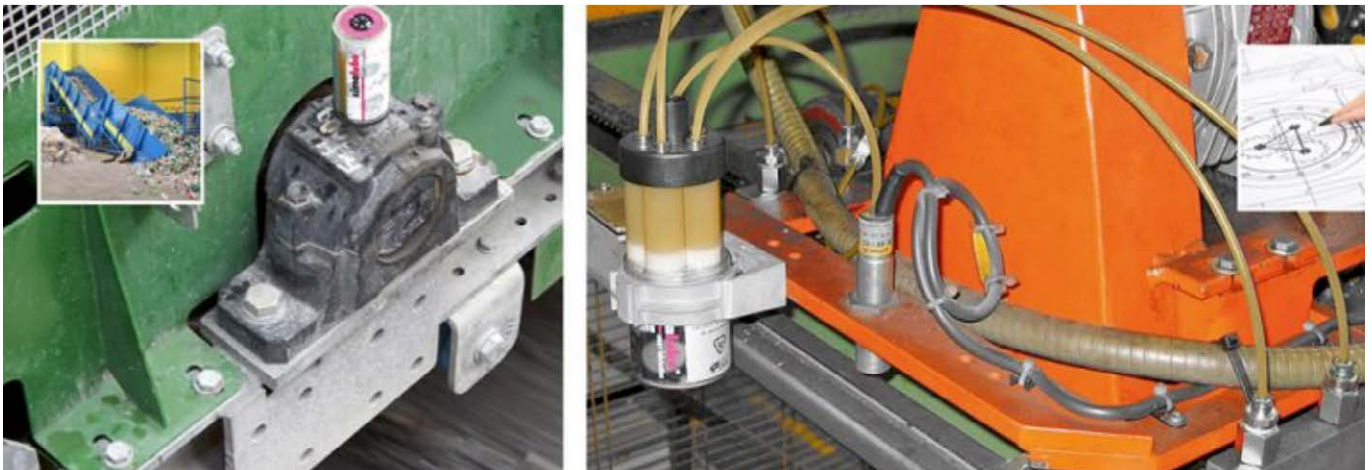
It is an effective way to increase machine availability while reducing reliance on scarce talent.

It provides the appropriate lubrication quantity at the correct intervals, minimizing friction and wear and optimizing bearing and machinery service life.



### D.6.2.3. AUTOMATIC SINGLE POINT OR MULTIPOINT LUBRICATORS

For consistent supply of lubricant (oil or grease) in the pre-adjusted amount the ANIS balers or conveyors can be equipped with Automatic single or multipoint point lubricators.



1 – Automatic single-point lubricator on conveyor system

2 – Automatic multi-point lubricator





# E. Extras

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Anything you need is possible: Depending on the purpose and your individual requirements, other function modules can be added to each baling press.

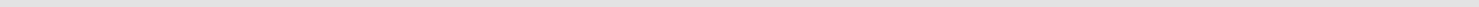
## Other options:

- Motors and pumps on request
- Vertical tier instead of horizontal one
- Additional vertical auto tier (cross tie)
- Wire guides system for big coils including palets
- Additional photocells to indicate overfeeding of the baler and activating other equipment
- Electrical cabinet heater at ambient temperatures of below 10 °C
- Oil tank heater at ambient temperatures of below 4 °C
- Air-conditioned electrical cabinet
- Air – oil cooler for use during continuous operation or high ambient temperatures
- Hose pipes extra protection (clamps)
- Extension of control system for multiple components with separate control panel in feeding area
- Special paintwork in the colour of your choice
- Extra painting layers on ISO12944 “C3” request (160µm)
- Adaptation hopper for optimum connection to feeding conveyor or similar
- Acoustic or visual warning signals
- and much more.













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All the activities in the company  
are organised in compliance with  
the ISO 9001 Quality System

