

# **APK ES Fully Automatic Baler**

# Overview

Capital Compactors & Balers provide a wide range of fully automatic balers for cardboard, mixed paper, plastic, wooden fruit boxes, PET bottles and lightweight waste. Capital Compactors & Balers have vast experience, and cooperation with many waste management and disposal companies as we offer a large variety of different equipment and components making the APK suitable for almost every material. Highly compacted and stackable bales ensure optimal truck and shipping container loading reducingCO2 emissions and improving the circular economy.

These continuous, reliable machines in combination with an optimal feeding attachment give modern, future-oriented and cost efficient waste handling. Models of the APK-ES are available different sizes with pressure forces of up to 1350kN. The use of trademarked components with high standard of quality guarantees a long life of the machine.

One big advantage of the machine includes the photocell operation which allows continuous feeding. An optimal designed press ram guide in combination with two specially shaped cutting units guarantee a trouble free continuous operation.

The APK can be fed through chutes, conveyer belts or exhaust systems and is therefore perfectly equipped for every logistic requirement.



## Machine

- Torsion free steel construction made of steel St52
- Replaceable wearing sheets made of HARDOX 450
- Key transfer system for more operator safety
- Inspection doors on both sides of the machine for a quick and safe maintenance



#### **Press Plate**

- Maintenance friendly press plate
- Big roller guide of the press plate allows to take this high pressure



# **Cutting System**

- Unique cutting system prevents material jamming and reduces energy consumption per pressing cycle by up to 40% (compared to conventional systems)
- Knives from press plate and counter knives made of hardened and cut tool steel K340
- Free press device (standard equipment)

In the case of overfilling the excess material is pushed away from the cutting edge. This additional equipment provides a continuous and trouble-free operation and should be integrated when a high throughput is expected (cardboard, paper)







# Hopper

- Diverse types of hoppers for different application areas and requirements
- Hopper for manual feeding
- Hopper with inspection door
- Intermediate hoppers
- Hopper for conveyor belts
- Tailor made hoppers

• Basic hopper with inspection door and window

#### **Option**

• Control light barrier Integrated in the hopper; needed for control of overfilling



## **Pressure Channel**

- Automatic pressure-controlled channel adjustment on three sides guarantee high bale weights
- Adjustable counter and opening pressure
- Adjustable pressure levels: program with up to 10 different pressure levels for optimal compaction of different materials
- Extended pressure channel, essential for frequent material changes and to increase bale density of materials with little friction (e.g. PET-bottles)



# **Hydraulic System**

- Special self-made hydraulic cylinders with hard chromed piston
- The hydraulic unit is equipped with a self-regulating low noise axial piston pump including automatic switch off
- Only selected brand components from reputable manufacturers (Rexroth, Parker) are used
- Spaciously dimensioned oil tank including oil filling
- Oil temperature and level monitoring
- $\bullet$  Oil filtering with pressure filter 10  $M\mu$
- Hydraulic valves and hydraulic lines generously dimensioned
- Maximum pressing speed together with low energy consumption is reached due to the use of optimal designed hydraulic blocks and valves

#### **Options**

- Oil heating and oil cooling systems (available are aggregates from 7,5-150 kW)
- Oil care system (cooling, heating and cleaning all covered by one system)







# **Binding System**

- Fully automatic binding inclusive wire drawing out facilities with drilling needles
- Perfectly sized binding (vertically or horizontally)
- Wire-saving binding system Drillfix 2.0 (saves 1 Meter wire per binding)
- For vertical binding and compaction of small parts (paper strips) a wire inserter ensures the safe transfer of the wire to the wire pulling unit
- Automatic cleaning system of binding slots by using binding needles (SPS program)
- To improve the quality of bales for expanding materials we provide additional bindings (also cross-strapping)

#### **Options**

- Wire Control: Possibility of electric wire monitoring; automatic report when wire ends
- Wire feeding Device: for 400-800 kg coils







# **Electrical Systems**

- Electric control Siemens S7-300 SPS
- Siemens Simatic HMI KTP700 Basic Color Display (Graphical display with all function indicators, used for storing various data, such as different bales, bale counting etc.)
- Settings: bale length adjustment, safety time for the hydraulic motor, light sensor delay, bale counter, operating hour counter, 2-channel emergency stop system, standard control box heating

#### **Options**

- **Special Controls:** electrical equipment is also available in other brands (Schneider, Allen Bradley)
- Control Completion: for conveyor belts or other feeding systems;

As potential free contact or with direct control development including circuit breaker and contactor.

• Two-pump-operation addidionally saves energy Example: 2 x 45kW

By using two separate pumps and two level control messages it is possible to use only one pump for low filling of the machine ( $180m^3/h$ ). If the filling raises the second light sensor reacts and the second pump is switched on (for up to  $360m^3/h$ )





#### **Extras**

#### Bale Crane

• Easy handling of the balesing needles

#### Perforator (2 sizes)

Slashes or stabs hollow plastic (eg PET bottles) before compaction and ensures an optimum compact bale

- Higher bale weights
- PFP650 with a throughput of up to 25.000 1I-bottles/h
- PFP825 with a throughput of up to 60.000 1I-bottles/h

#### Circulator (2 sizes)

- Distributes the material in the press room and therefore ensures an evenly constructed and compact bale
- Pre-crushing of the material NOT necessary
- Motor power 11kW or 15kW

#### Conveyor Belts

• The channel baling presses can be equipped with different conveyor belt systems.



# Minimise Your Waste Maximise Your Savings

#### **Capital Compactors and Balers**

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