colombi®

COLOMBI BIG

SPRING SEPARATING UNIT

TECHNICAL MANUAL

Tekno-Detaljer AB

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1 SYSTEM-DESCRIPTION

Colombi Big is a simple operated product for spring-separation and separation of other similar parts. The machine is switched on first and then the springs are poured into the separation-chamber throw the filling funnel. A rotation-procedure separates the tangled springs and feed them through the outlet.

The feeding-rate can be adjusted by the potentiometer (see sketch above.) and the adjustable outlet on the top-plate (see sketch above).

The BIG should never be operated with more than third full.

2 UNPACKING AND SETTING THE UNIT.

The Colombi Big must be placed on a horizontal and stable place.
Connect power to 115 or 230V, 10Amps depending on if it's a European or US-version (see the machine-sign on the backside).

3 OPERATING THE UNIT

- The machine must be switched on before charging tangled springs or parts
- A handful of springs is charged into the separation-chamber.Untangling will start at once.
- Optimum untangling efficiency and output rate will be achived by adjusting potentiometer and adjustable outlet.

CAUTION !!!

- **Springs must have an outside diameter from 5 to 25 mm and a length of max. 50 mm to be separated in a BIG.**
- **Rings and other flat parts must be more than 0.9 mm (0.035“) thick to be untangled in a BIG.**

3.1 Settings

Potentiometer:

- The potentiometer controls the motor speed, thus controlling the untangling function. It also has effect on the output rate
  Springs that would be damaged when untangled at high speed may be undamaged when speed is reduced.

Adjustable outlet:

- The internal size of the outlet can be adjusted to the spring or parts dimension and it is made with knob (Handle)
  When moved clockwise outlet increases, counterclockwise outlet decreases.

Overload:

- The BIG should never be operated more than third full.

The capacity depends on the quantity of springs in the separation-chamber and the rotation speed
When the BIG is overloaded with to many springs the outlet may be jammed and/or springs may not untangle properly.

3.2 Untangled springs

Certain kinds of springs may not be untangled and can be placed into the Big again or is taken away before next refill depending if they look ok.

3.3 Error-checking

Stoppage normally depends on differing springs. Endcoils not closed enough often cause problems. Weak and fragile springs may be hard to separate and requires quite low rotation-speed. If the springs are to big or long they might get stuck inside the outlet. Remove the top-lid and take away bad parts.
The control-unit (U1) is protected against overload and refuse to start the motor if it’s blocked by stucked springs. If the Big is connected to wrong power-supply the motor inside the Big is protected by fuses F1x2 (see electrical diagr.)

4 Maintenance

4.1 Daily

Make the following checks:

- The rotation-speed should be correct.
- Bad-parts should be removed before separation.

4.2 Weekly

- Remove all springs from the separation-chamber and blow out all the accumulated debris with a jet of air.
  This should be done more frequently if the springs being fed are soiled or greasy.

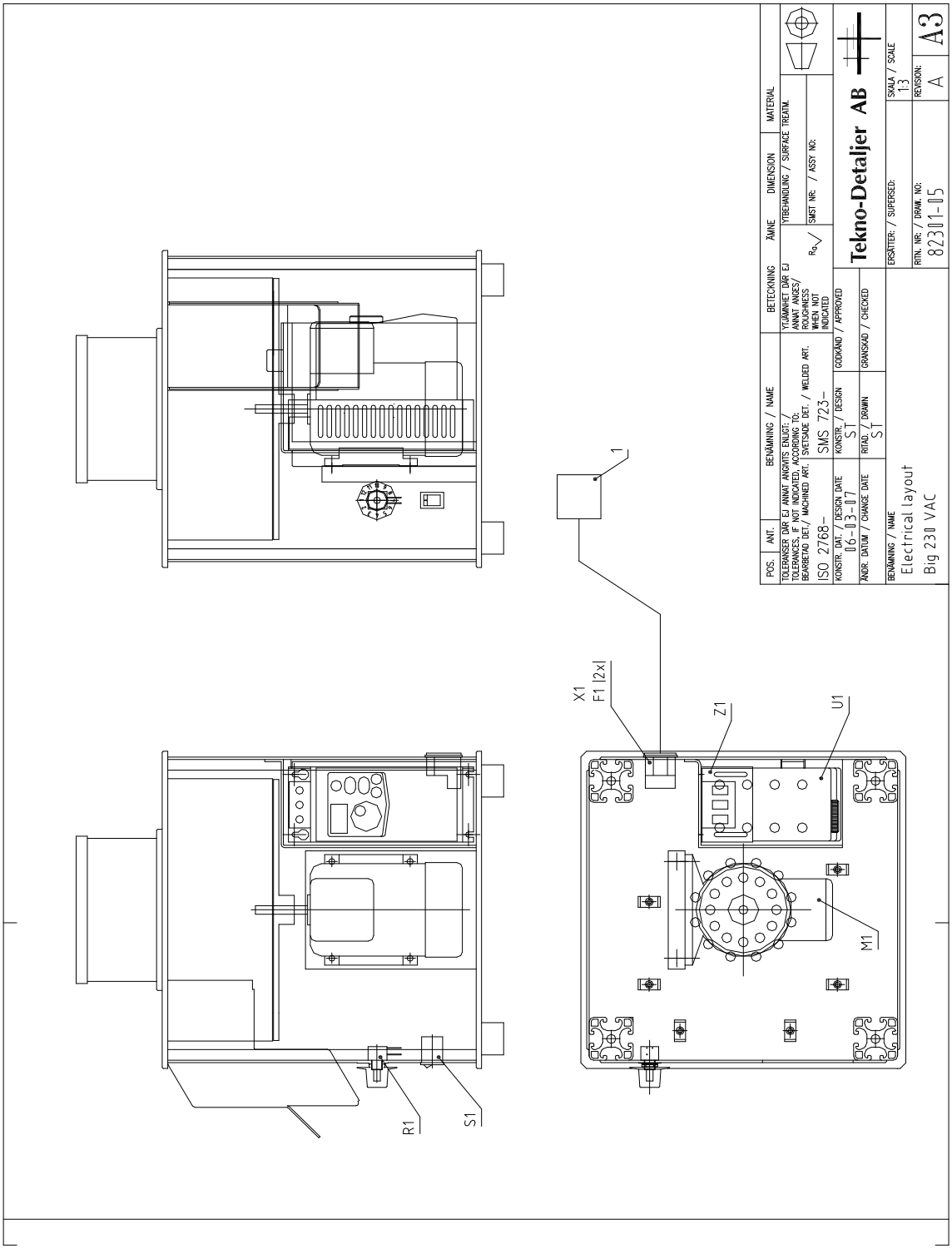
4.3 Electrical partlist : 82301-06 (230 VAC)

Pos.	Detail no.	Name.	No.
1	EIG0015	Power cable	1
WR1	EID0014	Cabel 3x0,34 LIYCY	0,5 M
F1	ETA0052	Fuse, 5AT 5x20mm	2
M1	80350	Motor, AC	1
R1	EKB0008	Potentiometer 1k	1
S1	EGA0001	Power switch	1
U1	EME0018	Frequency-converter	1
X1	EIB0002	Power inlet	1
Z1	EME0017	Filter, Freq. Conv.	1

4.4 Electrical partlist : 82302-06 (115 VAC)

Pos.	Detail no.	Name.	No.
1	EIG0017	Power cable	1
WR1	EID0014	Cabel 3x0,34 LIYCY	0,5 M
F1	ETA0052	Fuse, 5AT 5x20mm	2
M1	80350	Motor, AC	1
R1	EKB0008	Potentiometer 1k	1
S1	EGA0001	Power switch	1
T1	ETD0004	Transformer	1
U1	EME0018	Frequency-converter	1
X1	EIB0002	Power inlet	1
X2	EIA0018	Terminal, stop EW15	2
X2	EIA0020	Terminal, AKZ1,5	4
X2	EIA0019	Terminal, end AP	1
X2	EIA0017	Terminal base TS-15	0,05 M
Z1	EME0017	Filter, Freq. Conv.	1

4.5 Electrical diagram and layout : 82301-06 (230 VAC)



4.6 Electrical diagram and layout : 82302-06 (115 VAC)