

Erich Baumeister GmbH

ADT-Binder

Technical documentation



**Knotting and
binding machine**

**Operation
Documentation
Maintenance**

1st edition

Baumeister

www.erichbaumeister.com

ADT-Binder

Technical Documentation

1st edition

Status: February 1st, 2005

We reserve the right to make technical modifications

Editor

Erich Baumeister GmbH

Borghorster Str. 31, D-48366 Laer

Phone: +49 2554 9150-0, Fax: +49 2554 9150-30

E-Mail: info@erichbaumeister.com, Web: www.erichbaumeister.com

Typesetting & Layout

PER·CEPTO mediengestaltung

Text & Illustrations

Grafikbüro Schlotmann

General data

1.1 Name and address of the manufacturer

Erich Baumeister GmbH
Borghorster Str. 31 · PO-Box 69
48366 Laer (Germany)
Phone: +49 2554 9150-0
Fax: +49 2554 9150-30
eMail: info@erichbaumeister.com
Web: www.erichbaumeister.com

1.2 Classification and serial number

Knotting / binding machine
Type: ADT-.....
Serial number:

1.3 Technische Daten

Type: ADT-.....
Drive: Geared motor
Mains connection: 230 V 50 Hz
Power input: 0,37 kW
Protection class: IP54
Initiator: Start lever on table, foot switch, photo cell
Speed: 1 Takt pro Sekunde
Dimensions: 60 cm x 41 cm x 65 cm (L x B x H)
Table surface: 34 x 35 cm
Weight: 33 kg
Optional extras:
- higher speed
- left binder
- start lever from top
- foot switch
- Table surface 34 x 45

1.4 CE marking

The CE marking must be attached in the immediate vicinity of the rating plate so that it is clearly visible.

1.5 EU Certificate of Conformity according to Machinery Directive 89/392/EU Appendix II A

We hereby declare that the design of the machine with the rating stated in item 1.2 complies to the pertinent conditions of the UVV (Note of transl: Accident Prevention Act) within the meaning of the EU Machinery Directive 89/392/EU, Appendix II A.

Duties within the use of these operating instructions

2.1 Notice

The user of this machine must make sure that the operating personnel has read and understood the contents of this documentation and is comprehensively informed of its content before assembly and commissioning. If individual points are not quite clear or have not been understood, you must in all cases contact us as the manufacturers for clarity.

2.2 Guaranteed access

This documentation must be available to the user at all times by the selection of a suitable place to deposit it.

2.3 Deposit

This documentation must be kept in a place where the use can be guaranteed during the entire service life of the machine.

2.4 Alterations/supplements

Any alterations/supplements made to this documentation by the manufacturer must be added to the original version immediately.

2.5 Purpose of the instructions

This documentation is intended to inform the user of all details regarding the machine and to help using all machine functions. The operating instructions should enable the operator/user to carry out repairs and maintenance work as to adjust the performance of the machine himself to a restricted extent. Furthermore the documentation provides information of safety regulations and necessary rules of conduct.

2.6 Validity

This documentation is valid for the named machine type. Alterations will be documented via supplements and added to these instructions. This edition of the operating instructions will remain valid until replaced by a new version.

General safety information

In this chapter you will find general safety information. The overall operator and user is responsible for the safety information being read, understood and observed.

This binding machine has been developed and manufactures according to the latest scientific, technical and safety-relevant development results and regulations. In case of incorrect use, danger of injury to persons and damage to the machine may arise as a result.

Only use the binding machine if it is in immaculate technical condition. Any faults which may occur must be eliminated immediately. Always use the binding machine for its intended purpose!

The accident prevention regulation issued by the Trade Association must be observed in Germany. Outside Germany the accident prevention regulations of the respective country must be additionally observed.

3.1 Warning information and symbols/pictographs



Beware - electrical voltage!



Caution!



Attention - observe rotational direction!



Do not touch!

3.2 Correct use

The machine supplied by us is intended for the bundling of products suitable for bundling. After assembly and commissioning of the machine according to the operating instructions, this machine will bundle the product stated in the confirmation or order.

When operating the bundling machine, the limit of performance and the maximum load must be adhered to. You will find the required information in the technical data (section 1.3)

Any deviating use or use in excess of the stated limitations will be deemed to be incorrect. If the machine is used outside the limitations, danger of injury to persons and damage to the machine may arise as a result. The manufacturer will accept no liability whatsoever for injuries or damage resulting from incorrect use.

3.3 Organisational measures

The overall operator must instruct the operating personnel with regard to the knowledge of and adherence to the safety instructions. The information contained in these instructions must also be observed.

Before the first commissioning of the machine the operating personnel must have read and understood these operating instructions.

This documentation must be available for reference at the machine location at all times.

Obligatory and general rules for the prevention of accidents and for environmental protection must be adhered to.

The overall operator is responsible for the on-site availability of the necessary protective clothing and safety equipment. The overall operator must supply information regarding the necessary protective clothing.

3.4 Information with regard to

particular sources of danger ⚡ ⚠ ⚡

The machine must only be charged in the area provided for this purpose!

3.5 Danger zones

The immediate vicinity of the machine is considered to be a danger zone. Rotating parts are protected by guard plates. The operation of the machine without guard plates is not allowed! Safety switches must not be bridged!

3.6 Selection and qualification of the operating personnel

The operating personnel must be acquainted with the operation of our machine. The content of these operating instructions must have been fully understood. The valid accident prevention regulations must be additionally observed.

Description of the machine

4.1 Range of application

The ADT knotting and binding machine can be used for all materials suitable for bundling. In case of any doubt, please carry out a trial run to determine the bundle size and the necessary thread.

4.2 Functional description

The ADT bundling machine is suitable for bundling and packaging. The respective functions are started at the control panel. The material to be bundled is secured on the knotting table by the operating personnel. The machine can be stopped at any time by pressing the ON/OFF switch. After pressing the switch the machine must be re-started.

4.3 Safety equipment

All machine movements stop when the ON-OFF switch is pressed.

4.4 Power ratings and maximum loads

The machine reached the stated maximum power rating (see section 1.3).

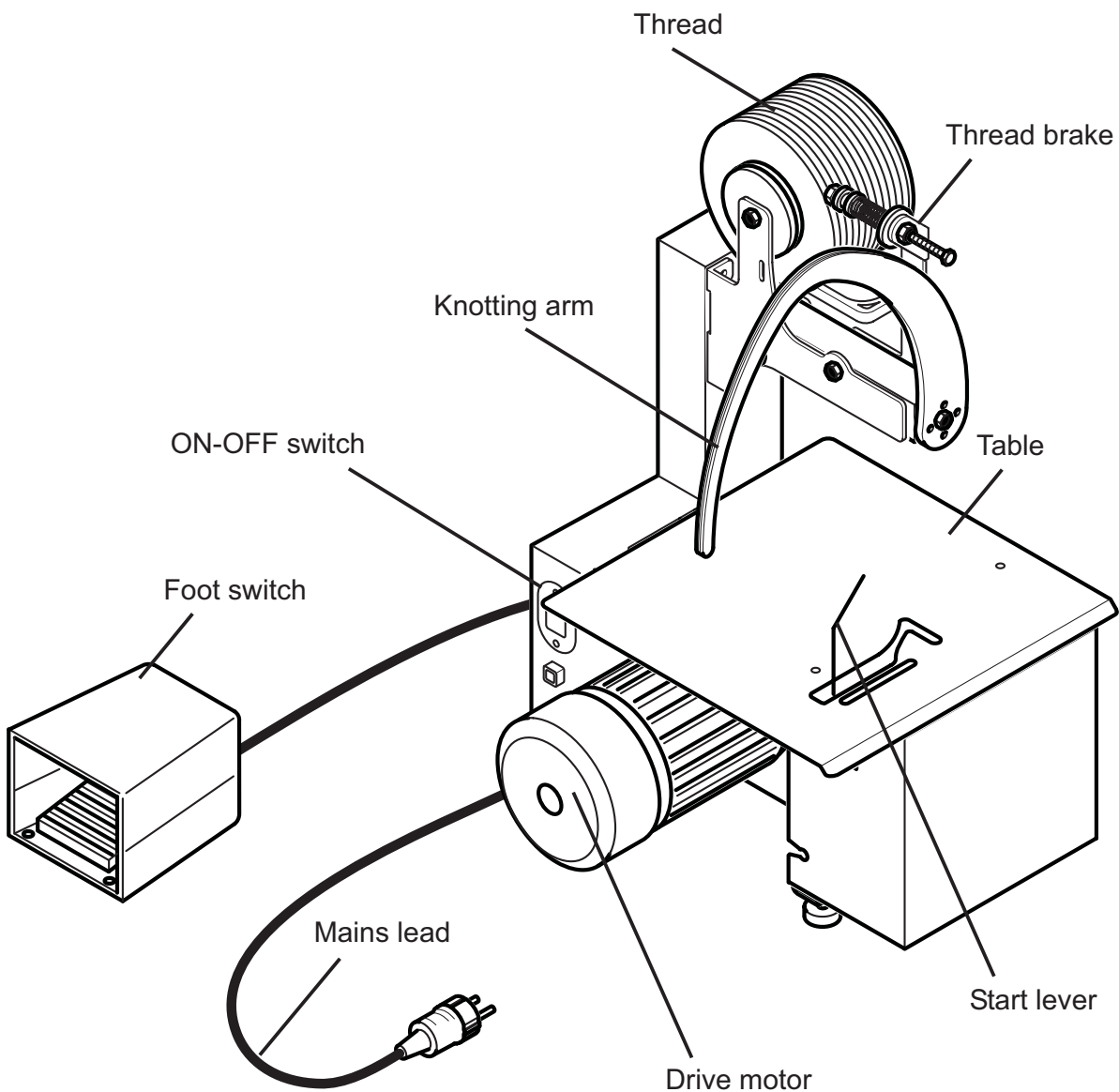
4.5 Emission

The machine supplied by us generates a noise level of less than 75 dBa when idling.

4.6 Operating materials

Apart from suitable bundling threads, no other operating materials are required for the use of the bundling machine. By using the 'Baumeister threads' you will obtain the best possible results, as all product features are designed to harmonise with one another.

4.7 Machine components



Operating conditions

5.1 Ambient assembly conditions

The assembly personnel must observe all legally required safety measures.

5.2 Ambient operating conditions

The ambient temperature around the machine must not be outside the range 0 - 50°C.

5.3 Supply connections

The wire cross sections of the electric cables must be selected according to the rated current of the drive motors.

Transport

6.1 Dangers during transport

The machines must be secured against slipping during transport. The fixing points must be adhered to resp. observed.

6.2 Reporting transport damage

Any damage caused during transport must be reported to the freight company and manufacturer without delay.

Assembly of the machine

7.1 Assembly regulations

Bei der Montage dieser Maschine sind die entsprechenden Unfallverhütungsvorschriften und die vom Hersteller gegebenen Hinweise zu beachten.

7.2 Assembly by the manufacturer

If the assembly is to be carried out by the manufacturer of this machine, please agree upon the procedure with the manufacturer.

7.3 Stability of the assembly location

Before assembly begins the assembly location must be checked for stability and load-bearing capacity.

7.4 Mechanical assembly

The following points must be observed when assembling this machine:
The bundling machine is delivered in an assembled state.

Stipulated tightening torques:

M 10/8.8	-	49 Nm
M 12/8.8	-	83 Nm
M 16/8.8	-	200 Nm
M 20/8.8	-	400 Nm

7.5 Electrical assembly

The electrical connection must only be carried out by qualified electricians according to the VDE regulations (Note of transl. Association of German Electricians), who know and observe the respective regulations of the EVU (Note of transl.: power supply companies).

A motor circuit breaker must be provided for safety reasons.

The connection must comply with the details stated on the rating plate and must be carried out according to the enclosed operating instructions/circuit diagram of the respective motor manufacturer.

The line voltage must be checked (see rating plate).

Operation of the machine

Before commissioning, the following points must be paid attention to:

8.1 First commissioning

Switch the machine on after having carried out the mechanical and electrical assembly according to the instructions.

8.2 Operating time

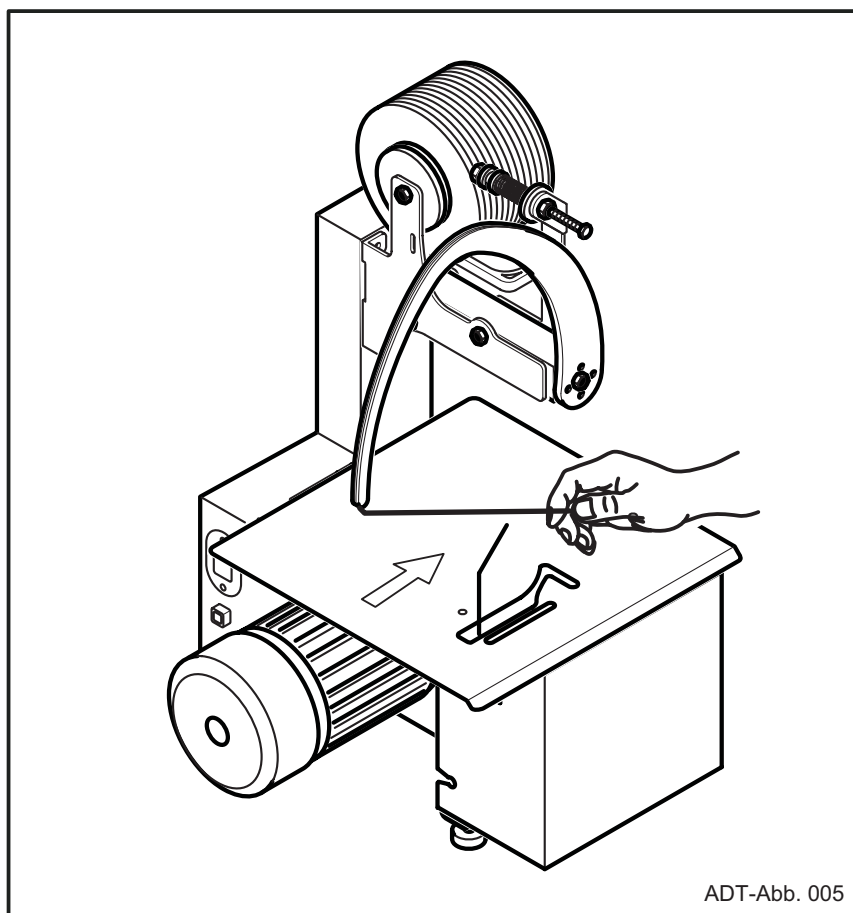
The machine is designed for 100% running time.

8.3 Electrical control system

The control elements are located in the switch cabinet (IP 54). The initiation of the bundling procedure takes place via the start lever or the foot switch or the photo cell.

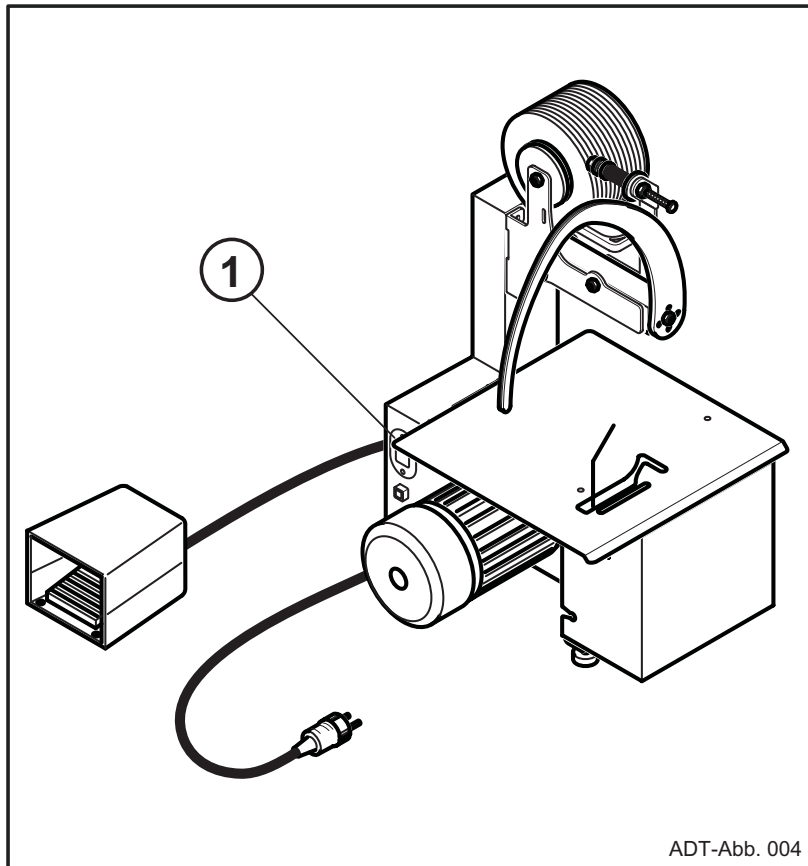
8.4 Operation of the machine

The thread must reel off from above. Hold the thread as illustrated in fig. 5. Press the ON-OFF switch. Check the correct tension of the thread. If necessary, adjust the thread tension as required (see section 9.3). The machine is now ready for the first bundling procedure.

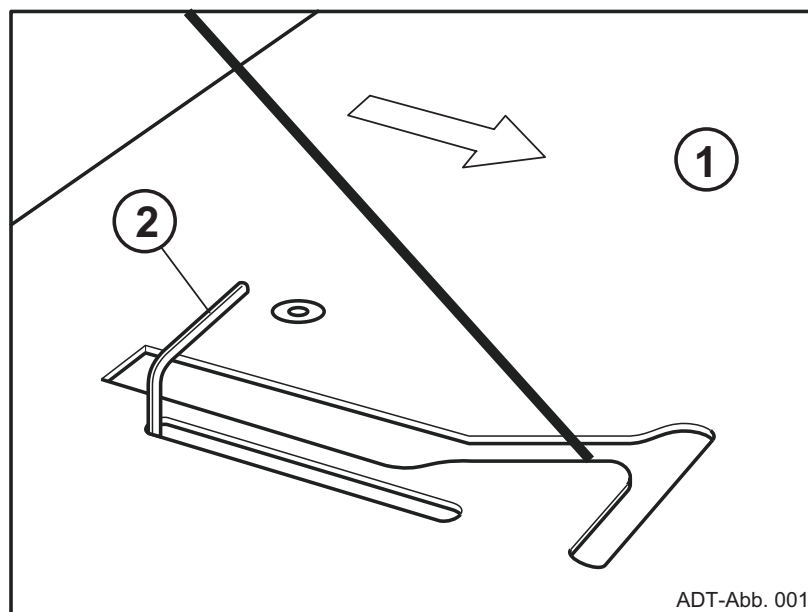


The goods to be bundled are guided on the machine table (1) towards the start lever (2) across the bundling direction.

The bundling procedure is started by pressing the start lever(2).



The speed of the bundling process is adjustable and can be adapted to the material to be bundled.

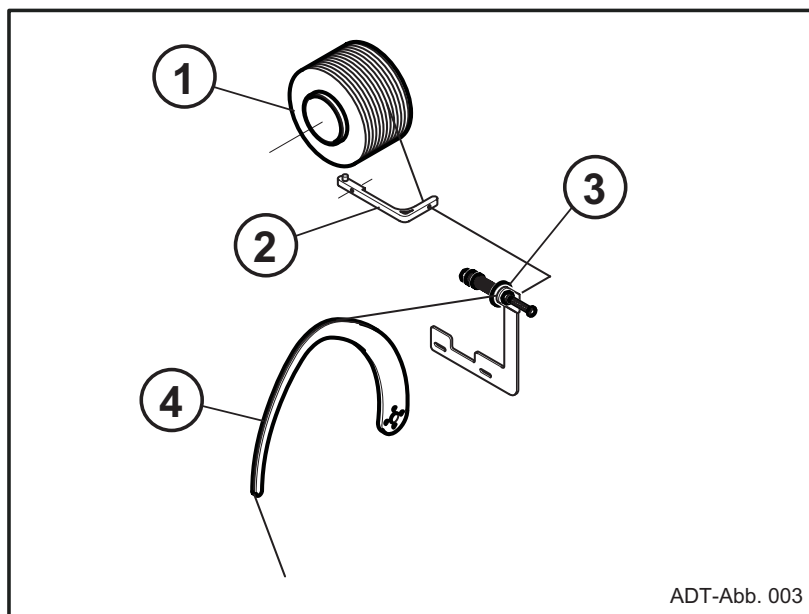


The bundling procedure ends with the automatic cutting off of the thread.
The machine is now ready for the next bundling process.

Settings

9.1 Applying the thread

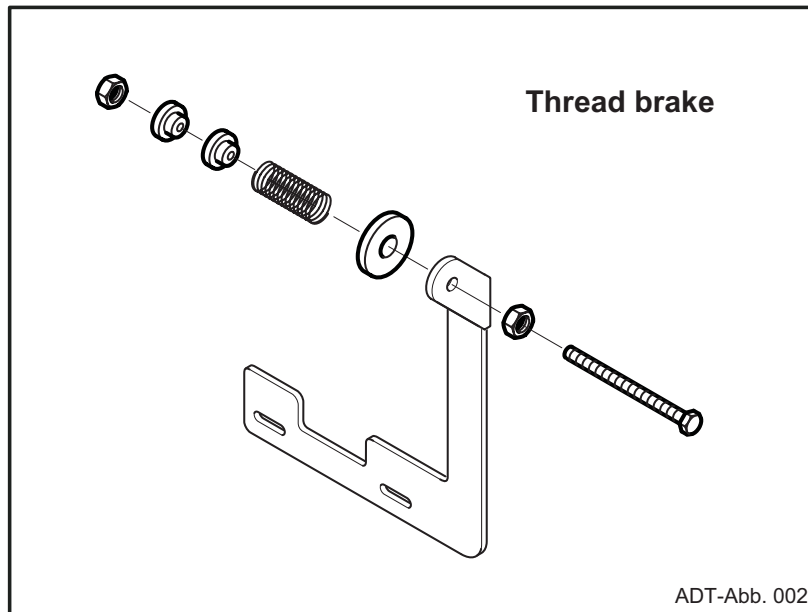
Guide the thread (as illustrated in fig. 3) from the thread roll (1), through the thread tightener (2), through the thread brake (3) and over the knotting arm (4).



9.2 Adjusting the thread brake

The settings of the thread brake are done by loosening the initial stress on the installed pressure spring. The thread tension should be reduced for larger products.

Avoid to tight a thread tension for sensitive products - is may lead to the products being cut by the thread. If the thread tension is too slack, the elastic thread will not be cut properly.



Maintenance

Always pull the plug out of the socket before beginning any repairs or maintenance work! Clean the machine on firm ground. Use compressed air or a brush. Keep the machine free of dirt.

Never use too much oil for lubrication. Always use a light oil. Oil all shafts, moving parts and the binding unit.

Fault finding and elimination

The machine isn't working

- Check the electrical connection.
- Check the mobility of the knotting arm.
- Check the function of the micro-switch that is actuated by the start lever.

The machine is running continuously

- Check the function of the micro-switch
- Check the control wheel

The thread is breaking

- Only use suitable thread.
- Check that the thread is not too old or too dry.
- Check whether the thread is running freely.
- Check the thread tension and adjust if necessary.
- Check the thread holder.

Thread wrapped around the binding unit

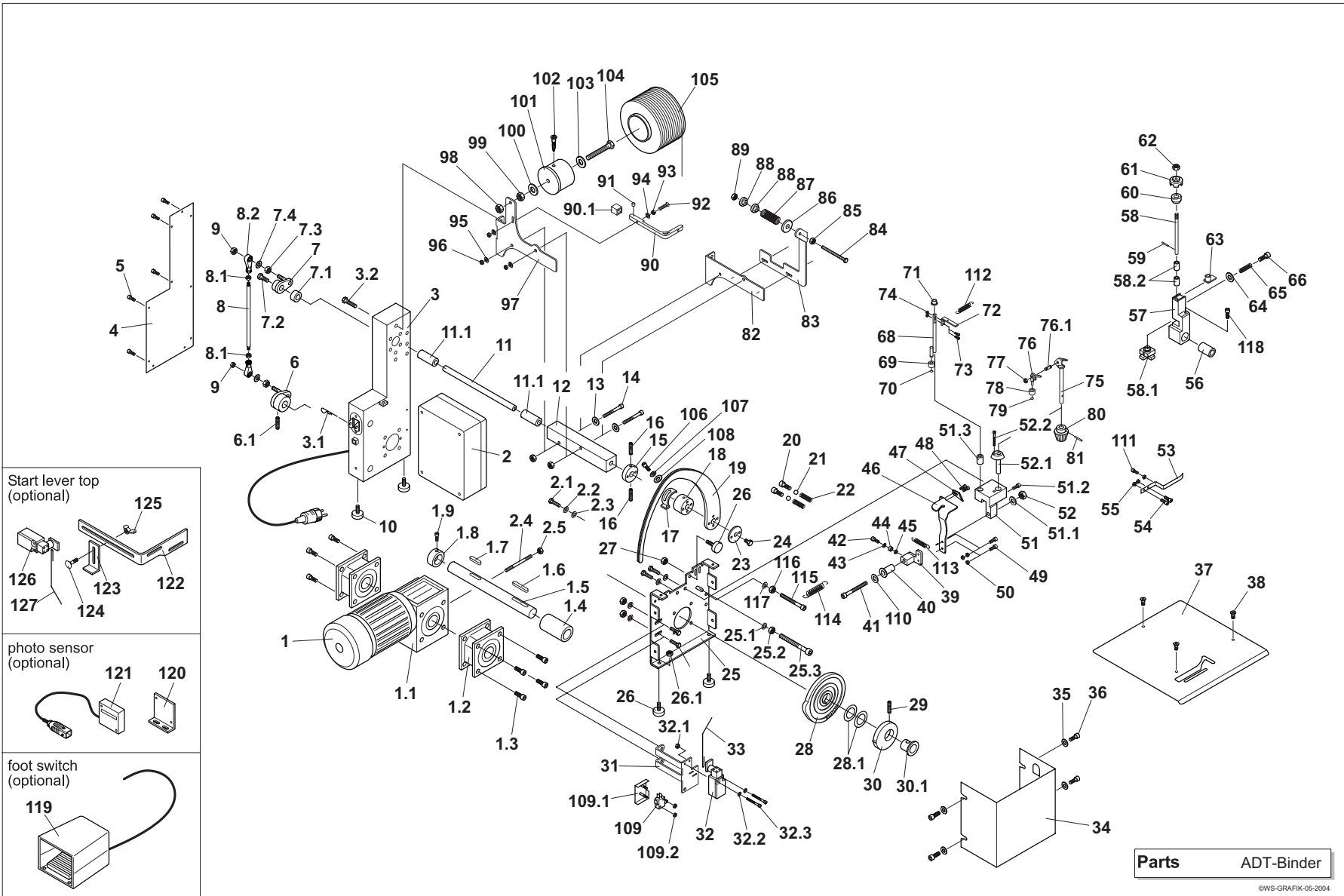
- Increase the thread tension.
- Check the cutter.
- Lubricate the binding unit.
- Loosen the spring of the binding unit.
- To free the machine of residual thread, let it run without thread a few times.

The knots are not stable

- Clean the binding unit.
- Check and increase the thread tension.
- Check the cutter.
- Increase the tension of the binding unit spring.

The knotting arm is not stopping in the right position

- The knotting arm should stop at the highest position.
- Loosen the screw.
- Turn the control wheel until the knotting arm is a few millimetres below the highest position.
- Tighten the screw again.



Spare parts list

Make sure to pull the plug out of the socket before beginning any repairs or maintenance work! ⚠

Pos.	Bestell-Nr.	Anzahl	Benennung
1	adt-e-1	1	Drive motor
1.1	adt-e-1.1	1	Gear
1.2	adt-e-1.2	2	Flange
1.3	adt-e-1.3	8	Cylinder-head screw
1.4	adt-e-1.4	1	Spacer sleeve
1.5	adt-e-1.5	1	Shaft
1.6	adt-e-1.6	1	Fitting key
1.7	adt-e-1.7	1	Fitting key
1.8	adt-e-1.8	1	Spacer sleeve
1.9	adt-e-1.9	1	Grubscrew
2	adt-e-2	1	Housing electrical system
2.1	adt-e-2.1	1	Screw
2.2	adt-e-2.2	1	Disk/washer
2.3	adt-e-2.3	1	Hexagon nut
2.4	adt-e-2.4	1	Thread rod
2.5	adt-e-2.5	1	Hexagon nut
3	adt-e-3	1	Frame
3.1	adt-e-3.1	1	Spring cotter
3.2	adt-e-3.2	1	Screw
4	adt-e-4	1	Frame cover
5	adt-e-5	10	Screw
6	adt-e-6	1	Crank lever, bottom
7	adt-e-7	1	Crank lever, top
7.1	adt-e-7.1	1	Bush
7.2	adt-e-7.2	1	Screw
7.3	adt-e-7.3	1	Hexagon nut
7.4	adt-e-7.4	1	Disk/washer
8	adt-e-8	1	Crank rod
8.1	adt-e-8.1	2	Hexagon nut
8.2	adt-e-8.2	2	Rod end
9	adt-e-9	2	Hexagon nut M10
10	adt-e-10	2	Rubber buffer
11	adt-e-11	1	Shaft
11.1	adt-e-11.1	1	Bush
12	adt-e-12	2	Arm
13	adt-e-13	2	Disk/washer

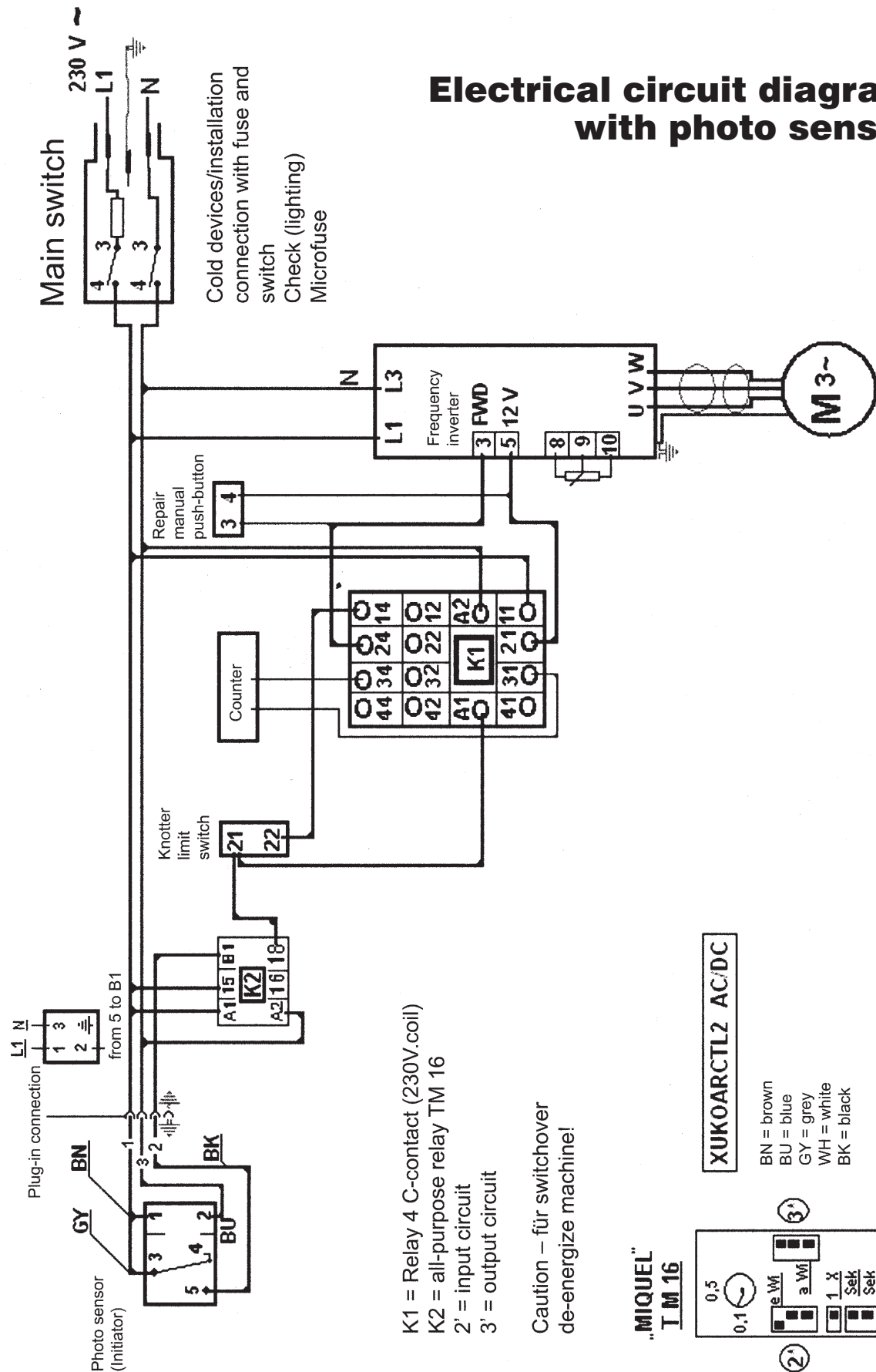
14	adt-e-14	2	Cylinder-head screw
15	adt-e-15	1	Disk/washer
16	adt-e-16	2	Grubscrew
17	adt-e-17	1	Stop friction clutch
18	adt-e-18	1	Friction clutch
19	adt-e-19	1	Knotting arm
20	adt-e-20	2	Cylinder-head screw
21	adt-e-21	2	Ball
22	adt-e-22	2	Pressure spring
23	adt-e-23	1	Disk/washer
24	adt-e-24	1	Hexagon screw
25	adt-e-25	1	Mounting plate
25.1	adt-e-25.1	1	Disk/washer
25.2	adt-e-25.2	1	Hexagon nut
25.3	adt-e-25.3	1	Cylindrical screw
26	adt-e-26	1	Rubber buffer
27	adt-e-27	2	Hexagon nut
28	adt-e-28	1	Steering wheel 1
28.1	adt-e-28.1	2	Washer
29	adt-e-29	1	Setscrew
30	adt-e-30	1	Steering wheel 2
30.1	adt-e-30.1	1	Bush
31	adt-e-31	1	Holder
32	adt-e-32	1	Start switch
33	adt-e-33	1	Start lever
34	adt-e-34	1	Guard plate
35	adt-e-35	1	Disk/washer
36	adt-e-36	1	Cylindrical screw
37	adt-e-37	1	Table surface
38	adt-e-38	1	Countersunk head screw
39	adt-e-39	1	Block for scraping plate
40	adt-e-40	1	Bush
41	adt-e-41	1	Cylinder-head screw
42	adt-e-42	1	Cylinder-head screw
43	adt-e-43	10	Disk/washer
44	adt-e-44	1	Bearing
45	adt-e-45	1	Hexagon nut
46	adt-e-46	1	Scraping plate
47	adt-e-47	1	Cutter
48	adt-e-48	2	Cylinder-head screw
49	adt-e-49	2	Cylinder-head screw
50	adt-e-50	2	Hexagon nut
51	adt-e-51	1	Knotter casing
51.1	adt-e-51.1	1	Disk/washer

ADT-Binder

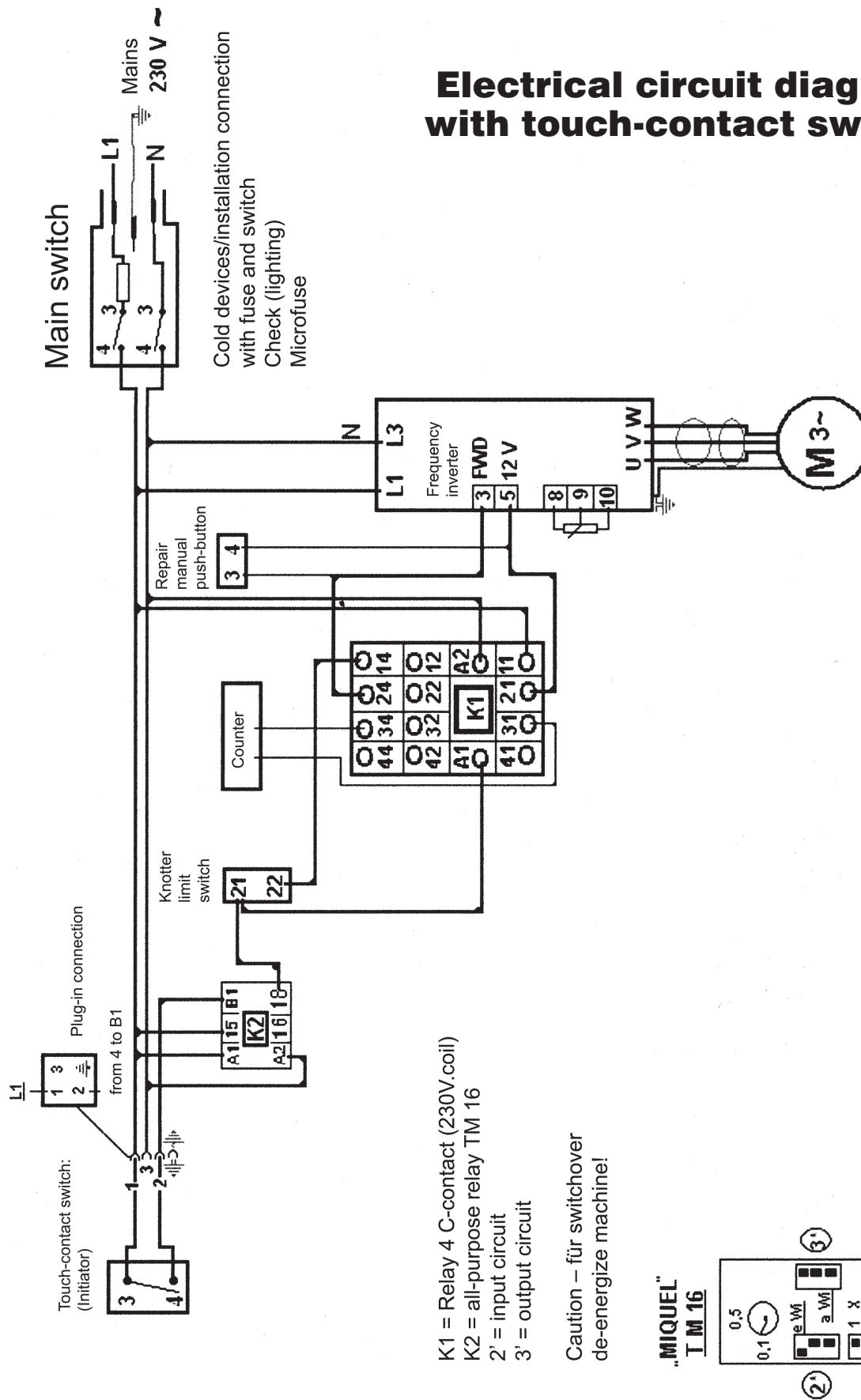
51.2	adt-e-51.2	1	Cylinder-head screw
51.3	adt-e-51.3	1	Bush
52	adt-e-52	1	Hexagon nut
52.1	adt-e-52.1	1	Holder for top section
52.2	adt-e-52.2	1	Cylinder-head screw
53	adt-e-53	1	Spring steel
54	adt-e-54	2	Cylinder-head screw
55	adt-e-55	2	Hexagon nut
56	adt-e-56	1	Bush
57	adt-e-7	1	Thread holder casing
58	adt-e-58	1	Shaft
58.1	adt-e-58.1	1	Cog wheel
59	adt-e-59	1	Pin
60	adt-e-60	1	Thread holder base
61	adt-e-61	1	Thread holder
62	adt-e-62	1	Hexagon nut
63	adt-e-63	1	Thread holder bush
64	adt-e-64	1	Disk/washer
65	adt-e-65	1	Pressure spring
66	adt-e-66	1	Cylinder-head screw
67	adt-e-67	1	Cog wheel
68	adt-e-68	1	Shaft
69	adt-e-69	1	Friction bearing
70	adt-e-70	1	Circlip
71	adt-e-71	1	Brass bush
72	adt-e-72	1	Lever
73	adt-e-73	2	Cylinder-head screw
74	adt-e-74	2	Hexagon nut
75	adt-e-75	1	Knotter top section
76	adt-e-76	1	Knotter bottom section
76.1	adt-e-76.1	1	Grub screw
77	adt-e-77	1	Screw
78	adt-e-78	1	Bearing
79	adt-e-79	1	Circlip
80	adt-e-80	1	Cog wheel
81	adt-e-81	1	Grubscrew
82	adt-e-82	1	Holder
83	adt-e-83	1	Holder
84	adt-e-84	1	Hexagon screw
85	adt-e-85	1	Hexagon nut
86	adt-e-86	1	Brake Disk/washer
87	adt-e-87	1	Pressure spring
88	adt-e-88	2	Adjusting Disk/washer
89	adt-e-89	1	Hexagon nut

90	adt-e-90	1	Coil brake
90.1	adt-e-90.1	1	Stop
91	adt-e-91	1	Rubber stop
92	adt-e-92	1	Countersunk head screw
93	adt-e-93	1	Hexagon nut
94	adt-e-94	1	Disk/washer
95	adt-e-95	1	Disk/washer
96	adt-e-96	1	Hexagon nut
97	adt-e-97	1	Holder
98	adt-e-98	1	Hexagon nut
99	adt-e-99	1	Hexagon nut
100	adt-e-100	1	Disk/washer
101	adt-e-101	1	Coil holder
102	adt-e-102	1	Countersunk head screw
103	adt-e-103	1	Disk/washer
104	adt-e-104	1	Hexagon screw
105	adt-e-105	1	Thread coil
106	adt-e-106	1	Cylinder-head screw
107	adt-e-107	1	Spring washer
108	adt-e-108	1	Disk/washer
109	adt-e-109	1	Micro-switch
109.1	adt-e-109.1	1	Holding plate
109.2	adt-e-109.2	1	Hexagon nut
110	adt-e-110	1	Disk/washer
111	adt-e-111	1	Cylinder-head screw
112	adt-e-112	1	Tension spring
113	adt-e-113	1	Tension spring
114	adt-e-114	1	Tension spring
115	adt-e-115	1	Cylinder-head screw
116	adt-e-116	1	Hexagon nut
117	adt-e-117	1	Disk/washer
118	adt-e-118	1	Cylinder-head screw
Optional			
119	adt-e-119	1	Foot switch
120	adt-e-120	1	Holder
121	adt-e-121	1	Photo sensor
122	adt-e-122	1	Arm
123	adt-e-123	1	Holder
124	adt-e-124	1	Screw
125	adt-e-125	1	Wing nut
126	adt-e-126	1	Start switch
127	adt-e-127	1	Start lever

Electrical circuit diagram with photo sensor



Electrical circuit diagram with touch-contact switch





www.erichbaumeister.com