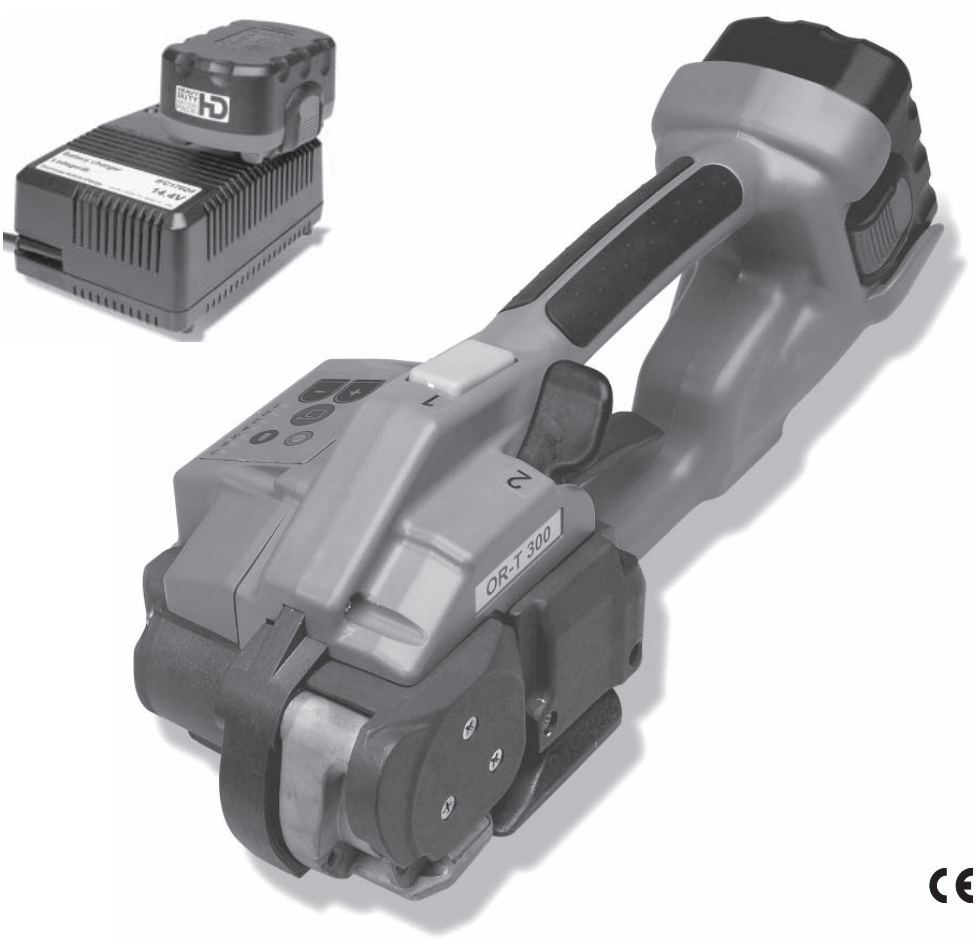
H-1465

OR-T 300

Battery-hand tool for plastic strapping

Before using the tool, read the operating instructions carefully.



CE

08/07

ORGAPACK

TABLE OF CONTENTS

1 TECHNICAL DATA

Weight	4.2 kg (9.9 lbs) (incl. battery)	
Dimensions	Length 375 mm (14.7“)	
	Width 130 mm (5.1“)	
	Height 140 mm (5.5“)	
Strap tension	400–3300 N (88–727 lbs)	
Tension speed	250 mm/s (9.8“/s)	
Sealing	Friction welded	
Emission sound pressure levels, measurement type A (EN ISO 11202)	L_{pA}	85 dB (A)
Vibrations at handle (EN ISO 8662-1)	$a_{h,w}$	2.2 ms^{-2}

BATTERY Bosch 14.4 V HD

Strappings with one battery charge	120–250 (PP) 80–150 (PET) depending on strap, strap tension and package
Service life	Up to approx 2000 chargings

BATTERY CHARGER IFC 1702d

Voltage	100–240 V
Mode of operation	Discharge/Charge
Charging time	approx. 60–75 minutes (incl. previous discharging)

PLASTIC STRAP

Strap quality	Polypropylene (PP) Polyester (PET)
Strap width adjustable to	15–16 mm ($^5/_8$“) (PET), 18–19 mm ($^3/_4$“) (PET, PP)
Strap thickness	Polypropylene 0.8–1.0 mm (.031“–.039“) Polyester 0.8–1.3 mm (.031“–.051“)

DECLARATION OF AGREEMENT

We take sole responsibility for declaring that the tool OR-T 300, to which this declaration refers, is in full compliance with the current requirements of the guidelines laid down by the council on 22th June 1998 (98/37/EEC), “Machine Guidelines“.

Furthermore, electrical installations are in compliance with the guideline laid down by the council on 3th May 1989 (89/336/EEC) “EMV Guidelines“.

According to norm:
EN ISO 12100-1, EN ISO 12100-2, EN 349, EN 1050, EN 50082-2, IEC 61000-6-2, EN 55022, EN 50081-1
CH-8953 Dietikon, March 2005

General Manager Sales & Marketing:	General Manager Products:
P. Spreng	M. Binder

2 GENERAL INFORMATION

These operating instructions are intended to simplify familiarisation with the strapping tool and its proper use for the intended purpose. The operating instructions contain important information concerning the safe, proper and efficient use of the strapping tool. Compliance with the instructions will help to avoid danger, reduce repairs and stoppages and increase the reliability and service life of the strapping tool.

The operating instructions must always be available at the place of operation of the strapping tool. They must be read and observed by all persons concerned with work on the strapping tool. This work specifically includes operation, refilling of operating material, fault elimination and maintenance.

In addition to the operating instructions and the regulations for accident prevention effective in the country of use and place of application, the recognised technical regulations for safety and proper operation must also be observed.

CAUTION!

Used where there is danger to life and health.

WARNING!

Used for danger which can cause material damage.

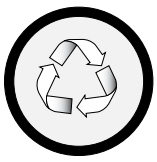
NOTE!

Used for general information and information which, if not followed can cause faults in the operating sequence.

2.1 INFORMATION ON ENVIRONMENTAL PROTECTION

This tool is manufactured without any physical or chemical substances which could be dangerous to health.

For disposal of all the parts, the governmental instructions must be observed. The electrical assemblies should be dismantled so that the mechanical, electromechanical and electronic components can be disposed of separately.



Dealers provide an environmentally-friendly battery disposal service

- Do not open the battery.
- Do not throw the used battery into household waste, fire or water.

Defective or used batteries undergo a complete recycling process.

3 SAFETY INSTRUCTIONS

Inform yourself!
Read the operating instructions carefully.
Preventive and corrective maintenance on the tool may only be carried out by trained personnel.

Protect yourself!
When operating the tool, wear eye, face and hand protection (cut-proof gloves).

Power source!
Before starting preventive or corrective maintenance, remove battery from the tool.

Warning:
Strap will snap forward!
When cutting the strap, hold the upper portion and stand safely away from the strap.
Caution:
The lower strap will snap forward.

Warning:
Strap could break!
Do not stand in line with the strap while it is tensioned. The strap could break!

Caution:
Only strap packed goods!
Do not put hands or other parts of the body between the strap and the package during the strapping process.

Caution:
Danger of squeezing!
Do not put your fingers into the tension wheel area.

Do not use water!
Do not use water or steam to clean the tool.

Original ORGAPACK spare parts must be used exclusively!
Not using original spare parts will dissolve the warranty and the liability.

Use for the intended purpose
This tool is designed for strapping packages, pallet loads and the like.

The tool was designed and manufactured to provide safe handling during the strapping operation.

The tool is designed for use with plastic straps (polypropylene and polyester).

Possible misuse
The use of steel straps is not possible.

3.1 SAFETY INSTRUCTIONS FOR BATTERY CHARGER AND BATTERY

Always inspect the electrical plug and cable before use. If damaged, they must be replaced by qualified personnel.

- Do not charge other types of batteries (see chapter 5.1) and use original accessories only.
- Keep the battery charger slot free of foreign objects and protect against dirt.
- Protect the battery charger against humidity and use it in dry areas only.
- Do not open the battery. Protect the battery against impact, heat and fire. Risk of explosion!
- When the battery is outside the battery charger, cover its battery terminals to avoid short circuits with metal objects. Risk of fire and explosion!
- Keep battery dry and protected against frost. Do not store it at temperatures over 50°C or below 10°C.
- Damaged batteries should not be used longer.

4 DESCRIPTION

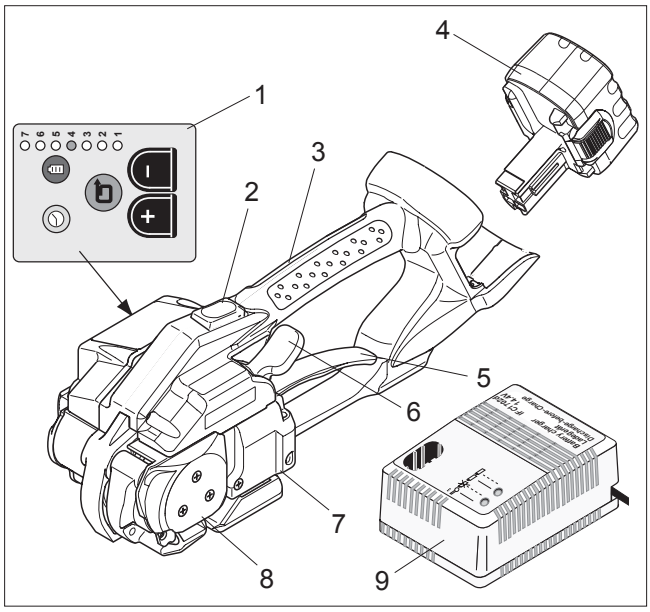


Fig. 1

4.1 CONSTRUCTION

1 Operating panel
2 Strap tensioning push button
3 Handle
4 Battery
5 Rocker lever
6 Welding/cutting button
7 Welding/Cutting
8 Tensioning
9 Battery charger (refer to chapter 4.4)

Note on performance

In order to achieve peak performance, only original batteries and charger may be used.

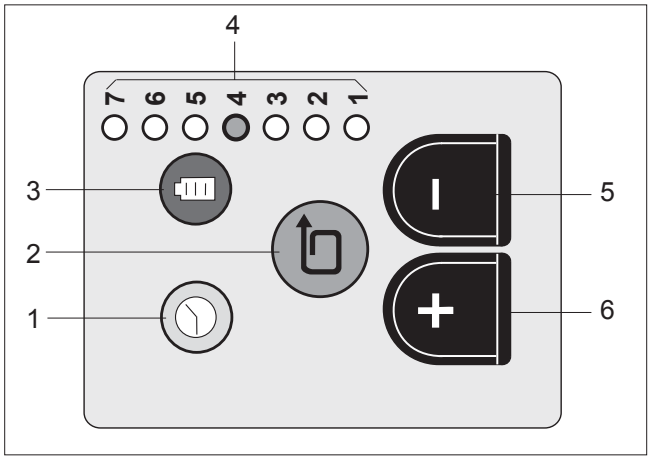


Fig. 2

4.2 OPERATING PANEL

1 Welding time push button
2 Strap tension push button
3 Battery push button
4 LED-indicators 1–7
  Green = Strap tension setting
  Red = Battery empty indicator
5 Setting – push button
6 Setting + push button

For detailed information of the operating panel, refer to chapter 6.3.

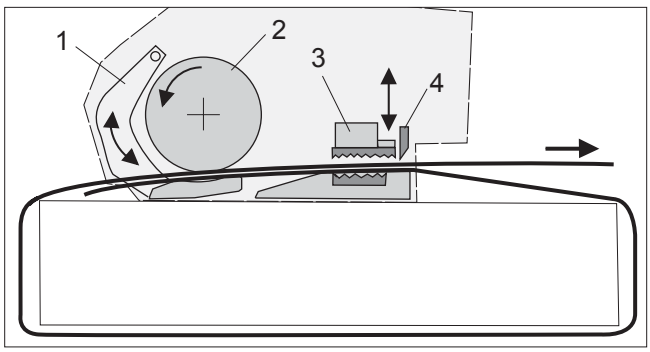


Fig. 3

4.3 FUNCTION

– Clamping of the straps by tooth plate on rocker (3/1).
– Tensioning by feed wheel (3/2) anti-clockwise.
– Friction welding (3/3) of the straps.
– Upper strap is cut by knife (3/4).

4.4 BATTERY CHARGER

The battery charger (IFC1702d) is a special device with both charging and discharging functions for maximum battery power and life.

– When a battery is placed in the charger, the remaining charge level is tested first. If the battery is not completely discharged, the charger will first empty it.
– After discharging, the battery charger switches automatically to charge. The battery will be fully charged in four steps by the pulse charging technique.

Battery discharging time: approximately 15 minutes with discharged battery from strapping machine
Battery charging time: 14.4 V/2.4 Ah > +/- 60 minutes

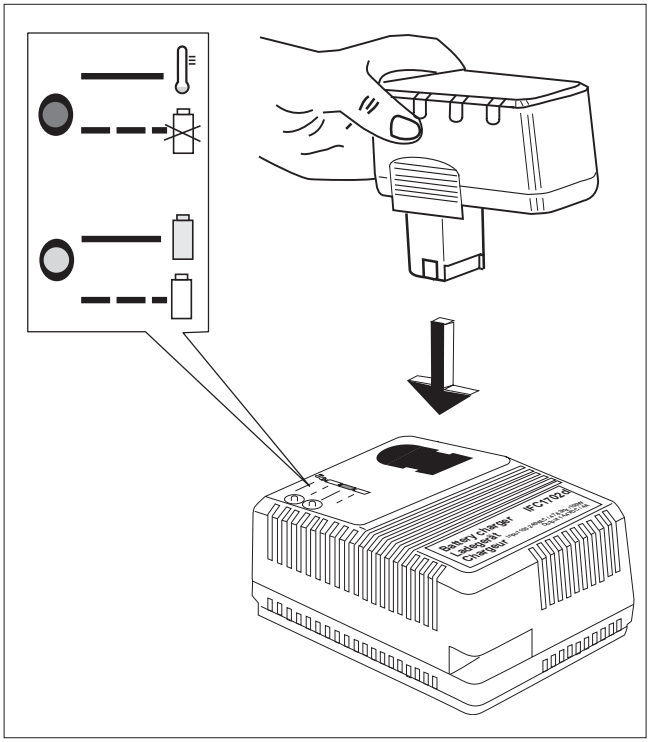


Fig. 4

Battery charger indicators:

Process / Status	Function	red LED	green/orange LED
Charger switched on	Standby	lit	LED lit green
↓			
Battery inserted	Discharging	off	LED blinks orange
↓			
Battery inserted	Charging	off	LED blinks green
↓			
Battery inserted	Charged, Trickle charging	off	LED lit orange
↓			
Battery removed	Standby	lit	LED lit green

5 INITIAL OPERATION

Input 90-135VAC, 170-264VAC / 47...65 Hz
Battery Type: Bosch NTC-Battery 14,4V

Fig. 5

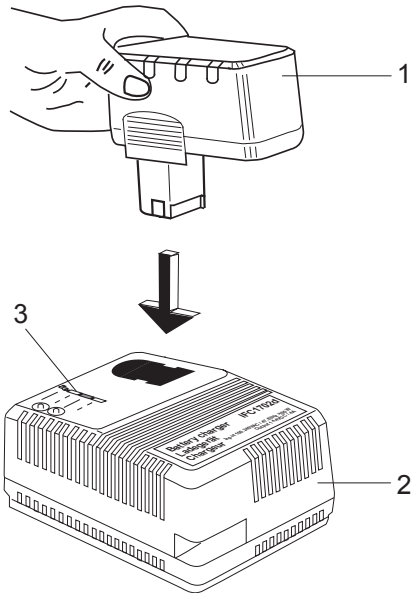


Fig. 6

5.1 BATTERY CHARGER

The mains supply must comply with the specifications on the rating plate (Fig. 5).

The battery charger is suitable only for charging batteries from the Bosch range of tools (NiCd/ NiMH) with the voltage of 14.4 V.

5.2 FIRST BATTERY CHARGE

Please observe the following points in order to ensure optimum battery life:

– Connect battery charger (6/2) to mains supply.
– Insert battery (6/1) into battery charger slot.

For the first charge, leave the battery in the charger for at least five hours, regardless of the battery indicator (the charging time for all subsequent charges is about 60 minutes).

For all subsequent charges, only recharge the battery when the LED indicator on the tool indicates battery empty or the battery charge indicators shows a minimum of level 5 or lower (see Chapter 6.3.1). Avoid charging when the battery is not yet discharged. This will ensure optimum battery capacity and life.

Maximum battery output will be reached after four or five charging/discharging cycles.

5.3 CHARGING THE BATTERY

The charging process and error functions are indicated by a LED (6/3) (see chapter 4.4).

The charging time is approximately 60–75 minutes.

The maximum charging current flows when the temperature of the battery is between 15–40°C. Avoid charging the battery at temperatures below 0°C and above 40°C.

If the battery is not to be used for a longer period (several days), it should be removed from the tool and charged/stored in the battery charger.

6 OPERATING INSTRUCTIONS

6.1 OPERATING THE TOOL

– Insert charged battery (7/1) into strapping tool.
– Place strap round goods to be packaged, so that the straps lie one above the other on top of package. The beginning of the strap is underneath. Hold the straps with the left hand so that the strap beginning is approximately 20 cm (8“) ahead of the hand.

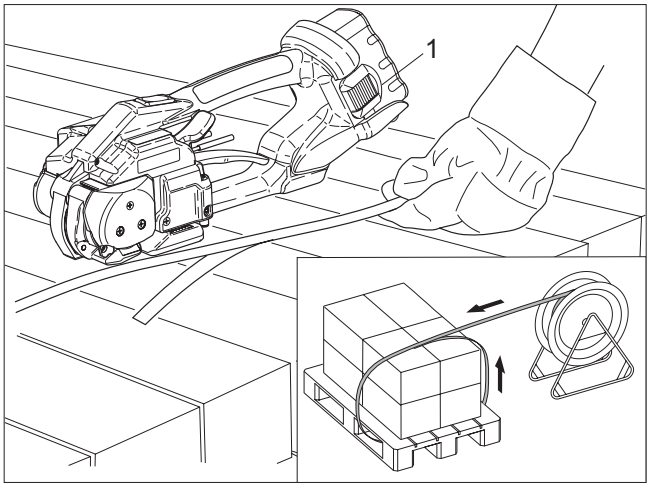


Fig. 7 Place strap around package

– Take the tool in the right hand and lift the rocker lever (8/1) towards the handle.
– Slide the straps, one on top of the other, into the tool up to the stop.

The strap lead is now approximately 5 cm (2“) beyond the tool.

– Release the rocker lever.

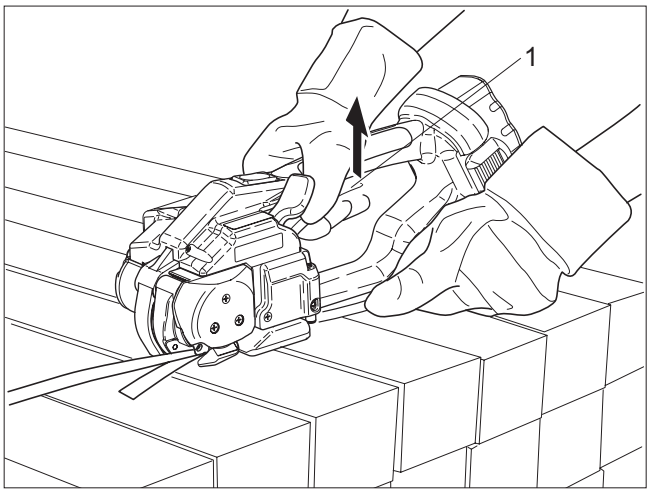


Fig. 8 Slide straps into tool

– Press the push button (9/1). The strap is tensioned until the required or pre-selected strap tension is reached.
– The strap tension can be adjusted on the operating panel (see Chapter 6.3.2).
– The strap can be re-tensioned at any time.

Releasing strap tension
In order to release the strap tension after the tensioning process, lift rocker lever (8/1) against handle.

Tensioning – welding:
The welding process is started only when the minimum strap tension of 400 N has been attained.

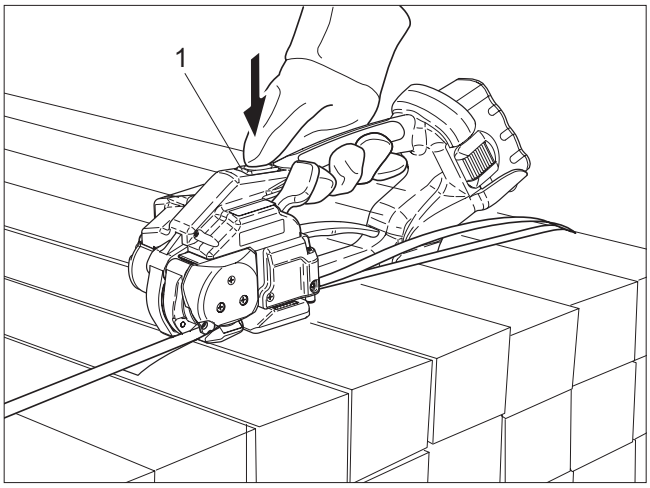


Fig. 9 Strap tensioning

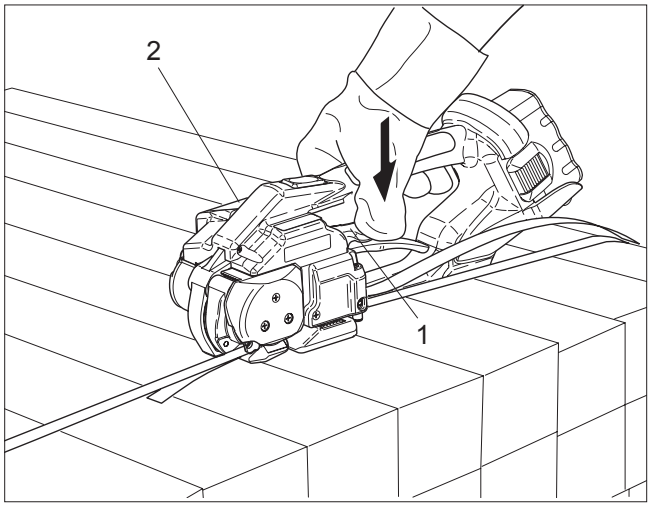
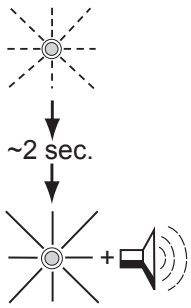


Fig. 10 Welding straps

– Depress button (10/1) completely to the stop. The straps are welded together and the upper strap is cut off. The LED indicator (10/2) indicates the cooling time of the sealing:



LED flashing
After finishing the friction welding, the green LED flashes for approx. two seconds.
Do not remove the tool during this time!

Continuous LED and audible signal
The sealing cycle is finished.

If the straps have not been welded and an audible signal sounds, this means the minimum strap tension was not attained –> re-tension.

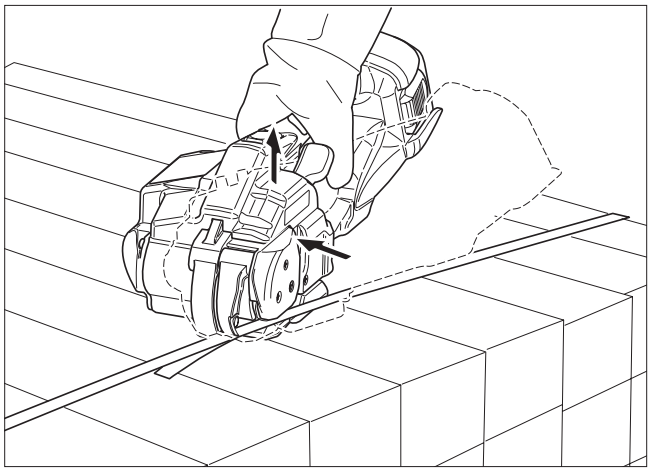


Fig. 11 Removing tool

– After the LED has stopped flashing and the audible signal sounds, raise the rocker lever up to the handle.
– Swing the tool away from the strapping backwards and to the right.
– Check the seal (refer to chapter 6.2).

If the tool is used in a dirty environment, it is recommended that it should be cleaned daily. In particular the tension wheel and the tooth plate should be checked for damage and kept clean. This is best performed by blasting with compressed air (wear goggles).

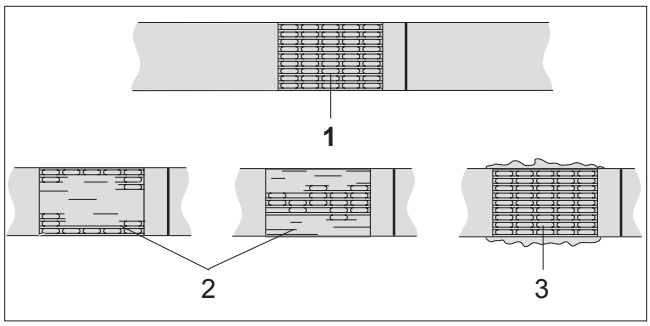


Fig. 12 Checking of seal

6.2 CHECKING THE SEAL

– Check appearance of seal (see fig. 12) regularly. If the straps are poorly welded, **check the welding time setting (refer to chapter 6.3.3).**

1 Good seal (the complete surface is cleanly welded without excess material being forced out sideways).
2 Poorly welded seal (not welded over the complete surface), welding time too short.
3 Poorly welded seal (excess material is forced out sideways), welding time too long.

An incorrectly welded strapping cannot secure the package and can thus lead to injuries.
Never transport or move packaged goods with incorrectly welded seals.

6.3 OPERATING PANEL

a) Standard indication (green)
The current strap tension setting is monitored with inserted and charged battery.
1 = minimum strap tension (approx. 400 N)
7 = maximum strap tension (approx. 1400/3300 N*)
* depending on strap tension range, refer to chapter 6.3.4.
– For adjustment of strap tension, refer to chapter 6.3.2.

b) Battery empty indication (red)
If the inserted battery is empty, the LED switches to red and the battery must be charged, refer to chapter 5.3.

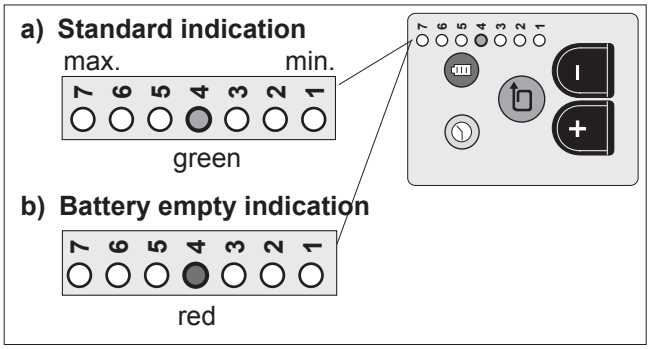


Fig. 13

6.3.1 CHECKING BATTERY CHARGE

– Depress battery push button (14/1) briefly. Read off battery charge on LED indicator (14/2).
1 = empty battery
1–3 = minimum charge (battery must be charged soon)
1–5 = decreasing charge (charging possible)
1–6 = good charge (charging would damage the battery)
1–7 = maximum battery charge (charging would damage the battery)

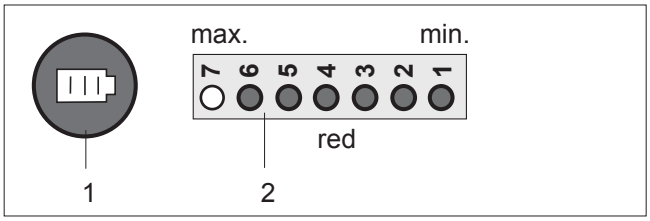


Fig. 14

6.3.2 SETTING STRAP TENSION

– Depress strap tension push button (15/1) briefly until LED indicator (15/3) flashes.
– Depress **–** or **+** push button (15/2) until flashing LED indicator shows required strap tension (wait two seconds until new setting is saved).
1 = minimum strap tension (ca. 400 N)
7 = maximum strap tension (ca. 1400/3300 N*)
* refer to Chapter 6.3.4.

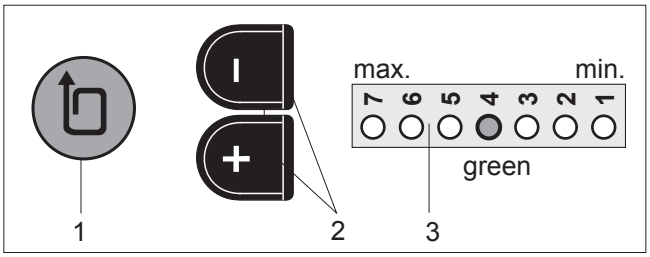


Fig. 15

6.3.3 SETTING WELDING TIME

– Depress welding time push button (16/1) briefly until LED indicator (16/3) flashes.
– Depress **–** or **+** push button (16/2) until flashing LED indicator shows required welding time (wait two seconds until new setting is saved).
1 = minimum welding time
7 = maximum welding time

Cutting:
The cutting of the strap is influenced by the welding time. If the tool cuts badly, extend the welding time by one interval.

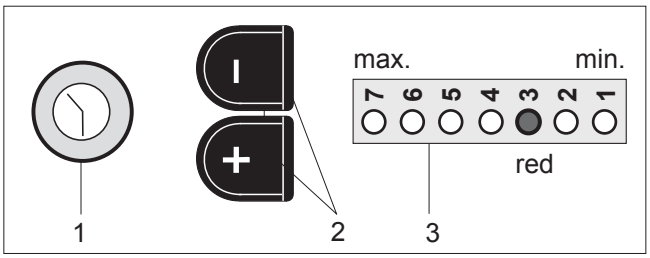
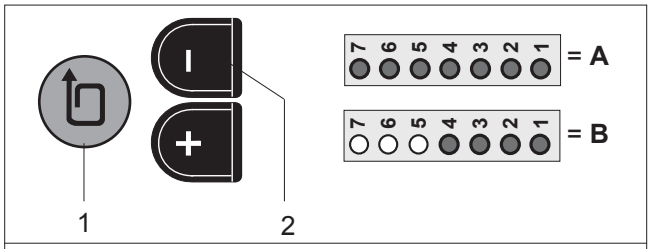


Fig. 16



A)

1	2	3	4	5	6	7
400*	750*	900*	1300*	1600*	2000*	3300 N*

B)

1	2	3	4	5	6	7
400*	600*	7500*	900*	1100*	1300*	1400 N*

Fig. 17

* Standard values! Actual value on package depends on strap and package.

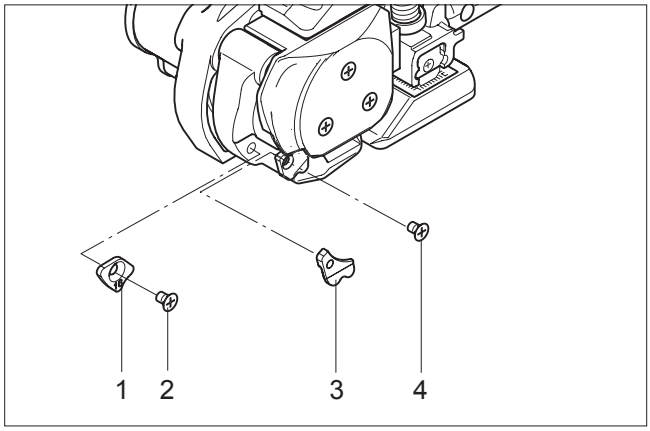


Fig. 18

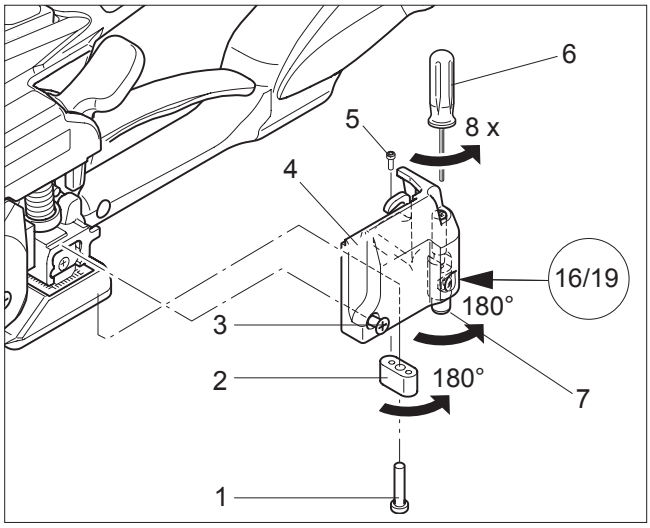


Fig. 19

6.3.4 SETTING STRAP TENSION RANGE

The following two strap tension ranges can be set on the tool:
A = 400–3300 N (standard)
B = 400–1400 N (eg for PP-straps)

Check strap tension range
– Depress and hold down "**–**" push button (17/2), and depress strap tension push button (17/1) for one second.
– If the LEDs 1–7 are flashing = A (400–3300 N)
– If the LEDs 1–4 are flashing = B (400–1400 N)

Change strap tension range
– Depress and hold down "**–**" push button (17/2), and depress strap tension push button (17/1) for one second.
– Depress "**–**" or "**+**" push button briefly so strap tension range changes (wait two seconds until new setting is saved).

6.4 SETTING STRAP WIDTH

The tool can be used with two different strap widths (15–16 mm ($^5/_8$") or 18–19 mm ($^3/_4$").

a) Change strap width from 15–16 mm to 18–19 mm
– Remove battery from tool.
– Release sunk screw (18/2) and remove strap stop 16 mm (18/1).
– Lift the rocker lever towards the handle, release sunk screw (18/4) and remove strap guide 16 mm (18/3).

– Release sunk screw (19/3) and cylinder screw (19/1) and remove cover (19/4).
– Release cylinder screw (19/5) turn strap stop (19/2) 180° and remount it.
– Unscrew threaded bolt eight turns with screwdriver (19/6).
– Pull down strap guide (19/7) and turn it 180° until 19 mm indicator appears.
– Tighten threaded bolt with screwdriver (19/6) and mount cover (19/4).
– Secure screws (19/1) and (19/3) with Loctite 222.

b) Change strap width from 18–19 mm to 15–16 mm
– Sequence as described under point a).
– Mount 16 mm strap stop (18/1) and secure sunk screw (18/2) with Loctite 222.
– Mount 16 mm strap guide (18/3) and secure sunk screw (18/4) with Loctite 222.
– Turn strap stop (19/2).
– Turn strap guide (19/7) until "16" indicator appears.

7 PREVENTIVE AND CORRECTIVE MAINTENANCE

7.1 CLEANING/REPLACING TENSION WHEEL

All preventive maintenance tasks can be performed with a Phillips screw driver!

Removal
- Remove battery from tool.
- Release three sunk screws (20/3) and remove cover (20/2) with ball bearing.
- Carefully remove tension wheel (20/1).
- Clean the tension wheel with compressed air (wear goggles).
- If the tension wheel teeth are covered with heavy dirt, they must be carefully cleaned with the wire brush supplied or a sharp tool.
- Check tension wheel for worn teeth. If a few teeth are worn, replace tension wheel.

The tension wheel must not be cleaned while it is rotating. There is a risk of breaking teeth!

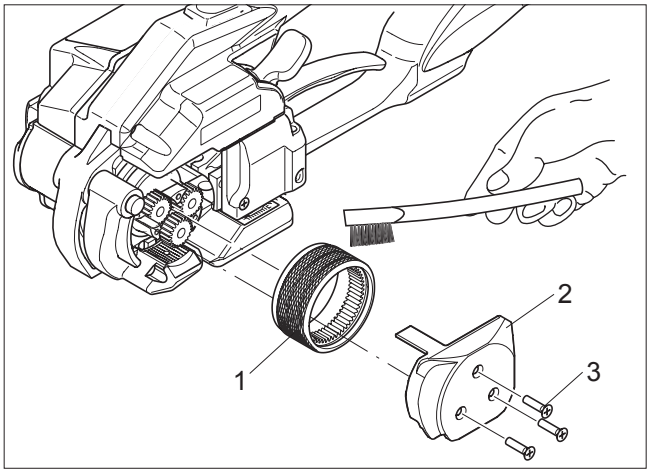


Fig. 19

Installation
- Install the parts in reverse order.
- Grease gear teeth of tension wheel **lightly** with Klüber grease GBU Y 131 (Microlube).
- Secure sunk screw (20/3) with Loctite 222.

7.2 CLEANING/REPLACING TOOTH PLATE

Removal
- Remove battery from tool.
- Release sunk screw (21/1) and remove tooth plate (21/2).
- Clean tooth plate with compressed air (wear goggles).
- If the tooth plate teeth are covered with heavy dirt, they must be carefully cleaned with the wire brush supplied or a sharp tool.
- Check tooth plate for worn teeth, if necessary replace tooth plate.

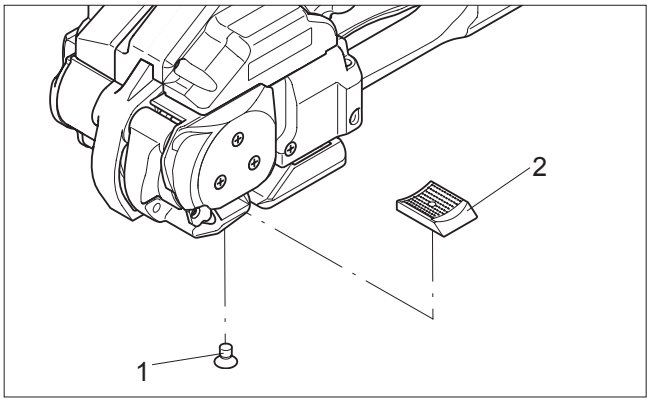


Fig. 21

Installation
- Install the parts in reverse order.
- Secure sunk screw (21/1) with Loctite 222.

7.3 REPLACING CUTTING KNIFE

Removal
- Remove battery from tool.
- Release sunk screw (22/2) and cylinder screw (22/1) and remove cover (22/3).
- Release cylinder screw (22/6) and remove cutting knife (22/4) with flanged bushing (22/5). Replace cutting knife.

Installation
- Install the parts in reverse order.
- Before install cutting knife, check that the compressing spring on top of knife is still mounted.
- Secure screw (22/1), (22/2) and (22/6) with Loctite 222.

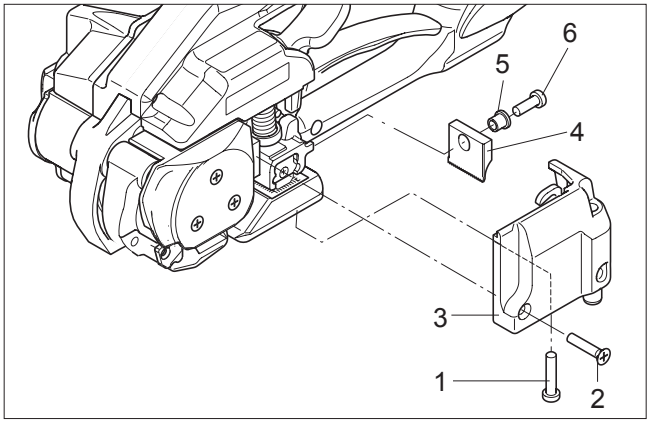


Fig. 22