



# Original Operating Instructions

For ErgoPack Air 713-580 / 726-580 / 745-580

Serial No. \_\_\_\_\_

# Declaration of conformity

## **EU declaration of conformity for the purposes of the EU machine directive 2006/42/EG**

ErgoPack Deutschland GmbH  
Hanns-Martin-Schleyer-Str. 21  
89415 Lauingen

We hereby declare that the strapping systems "ErgoPack Air 713-580 / Air 726-580 / Air 745-580", to which this declaration refers, complies with all the relevant and basic health and safety requirements because of their concept, type of construction and the model we have brought on to the market.

This declaration loses its validity if a change is made to the system without our permission.

Respective

EU directives:

EU Machine directive (2006/42/EG)  
EU Low voltage directive (2006/95/EG)  
EU Guideline on electromagnetic compatibility  
(2004/108/EG)

Applied standards

EN ISO 12100: 2010  
EN ISO 13849-1:2007  
EN 60204-1:2007 + A1:2009  
EN 61000-6-2:2005  
EN 55011: 2009 + A1:2010 (Marginal class B)  
EN 415-8:2011

Since strapping system: 0319XXXX/0188AIR

Since year of manufacture: 2019

Lauingen, 14th of June, 2018



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# Validity of the operating conditions

## **ErgoPack Air 713-580**

Strapping system with electrical drive, electronically controlled via joystick, with sealing head for strap widths of 9-13 mm and a maximum tension of 1200N, electronically adjustable for heights from 2,5- 57cm.

## **ErgoPack Air 726-580**

Strapping system with electrical drive, electronically controlled via joystick, with sealing head for strap widths of 12-16 mm and a maximum tension of 2500N, electronically adjustable for heights from 2,5- 57cm.

## **ErgoPack Air 745-580**

Strapping system with electrical drive, electronically controlled via joystick, with sealing head for strap widths of 15-19 mm and a maximum tension of 4500N electronically adjustable for heights from 2,5- 57cm.

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# 1. Technical data

## 1.1 Strapping system

**Weight (ready for use)**

- incl. battery	
- without strap	
- without lifting device	280 kg

**Dimensions**

	<b>without control panel</b> (removable)	<b>including control panel</b>
Length:	1340 mm	1360 mm
Width:	1120 mm	1240 mm
Height min (height adjustment at lowest point):	1600 mm	
Height max (height adjustment at highest point):	1930 mm	

**Maximum speeds of chain:**

Moving out horizontally:	40 m/min
Moving out vertically:	60 m/min

<b>Max. chain thrust:</b>	310 N
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**Measured A-assessed**

<b>Noise emission level</b> (EN ISO 11202)	L <sub>pa</sub> 79 dB (A)
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## 1.2 Sealing Head

### Weight

(incl. spiral cable)

3,8 – 4,3 kg

### Dimensions

Length 335 mm

Width 140 mm

Height 180 mm

### Tension

Air 713-580

150 - 1200 N

Air 726-580

400 - 2500 N

Air 745-580

400 - 4500 N

### Tensioning speed

290 mm/S (Air 713-580)

220 mm/S (Air 726-580)

120 mm/S (Air 745-580)

### Sealing

Friction welding

### Measured A-graded

noise emission level

(EN ISO 11202)

Air 713-580 L<sub>pa</sub> 79 dB (A)

Air 726-580 L<sub>pa</sub> 78 dB (A)

Air 745-580 L<sub>pa</sub> 79 dB (A)

(EN 60745-1/2:2009)

L<sub>paeq</sub> 77 dB (A)

L<sub>paeq</sub> 82 dB (A)

L<sub>paeq</sub> 81 dB (A)

### Sound power level, on average

(EN 60745 -1/2:2009)

Air 713-580 L<sub>waeq</sub> 88 dB (A)

Air 726-580 L<sub>waeq</sub> 93 dB (A)

Air 745-580 L<sub>waeq</sub> 92 dB (A)

### Measurement inaccuracy K

Air 713-580 3,0 dB (A)

Air 726-580 3,0 dB (A)

Air 745-580 3,0 dB (A)

**Hand arm vibrations**

(EN 60745-1/2:2009)

Air 713-580	a 2,4 ms <sup>-2</sup>
Air 726-580	a 2,4 ms <sup>-2</sup>
Air 745-580	a 2,3 ms <sup>-2</sup>

**Measurement inaccuracy K**

Air 713-580	1,5 ms <sup>-2</sup>
Air 726-580	1,5 ms <sup>-2</sup>
Air 745-580	1,5 ms <sup>-2</sup>

**Plastic strap**

Strap materials	Polypropylene (PP) Polyester (PET)
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**Strap width**

Air 713-580, adjustable to	9 – 10 mm 12 – 13 mm
Air 726-580, adjustable to	12 – 13 mm 15 – 16 mm
Air 745-580, adjustable to	15 – 16 mm 18 – 19 mm

**Strap thickness**

Air 713-580	0,40 - 0,80 mm
Air 726-580	0,50 - 1,00 mm
Air 745-580	0,80 - 1,30 mm

## 1.3 Charger, battery, battery change trolley

<b>Charger</b>	3-step-lead-charger Prim.: 100-240 VAC 50/60 Hz max. 5,0 A Sec.: 2 x 12 V DC/5A Total max. power 2 x 73,5 W		
<b>Battery Pack</b>	24V AGM battery		
Weight:	39,5 kg		
Length:	580 mm		
Width:	225 mm		
Height:	220 mm		
Charging time:	approx. 8 hours		
Temperature range:	5 °C – 40 °C		
Number of strappings:	150 to 500 per charge, depending on size of pallet, tension, welding time, frequency of height adjustments and battery pack temperature.		
Life span:	approx. 500 charges		
<b>Battery change trolley</b>			
Weight:	13 kg	Width:	550 mm
Length:	720 mm	Height:	1035 mm



## 2. General

These operating instructions shall help get to know the system and to work with it according to its intended use. The operating instructions contain important notes on how to use the system safely, properly and economically.

Adhering to the notes helps to avoid dangers, repairs and down times and also increases the reliability and life span of the system.

**The operating instructions must be available at the place where the system is used. It has to be read, understood and used by everybody working with the system.** These works include operation, maintenance and repair.

In addition to the operating instructions and the regulations in the country and place of use related to the prevention of accidents, the recognized special rules for working safety and according to proper and professional standards also have to be respected.

## Meaning of warning symbols, usage conventions



### ***Warning!***

Marks a hazard with moderate risk.  
If not avoided, it can result in death or serious injury.

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### ***Caution!***

Marks a hazard with a minor risk.  
If not avoided, it can result in a minor or moderate injury.

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### ***Attention!***

Marks a situation to be considered.  
If not considered, it can lead to material damage or poor operating results.

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### ***Note!***

Marks useful, additional information.

## 2.1 Notes on environmental protection

Physical or chemical materials which could be injurious to health have not been used for manufacturing the system.

The valid, legal regulations have to be taken into consideration during disposal. The electrical components have to be dismantled first, so that the mechanical, electromechanical and electronic components can be disposed separately.

Specialist dealers offer disposal according to proper environmental protection.

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

## 3. Safety regulations

### 3.1 Safety regulations for operating the strapping system



#### **Inform yourself!**

The operating instructions have to be read carefully and understood before using the system. The system may only be serviced and maintained by trained personnel.

---



#### **Wear protective helmet!**

Wear protective helmet when strapping pallets exceeding a height of 1,20 m.

The obligation to wear a helmet can be avoided if the operator was taught about the risk of injury by the plastic chain falling down. This instruction has to be recorded in written.

---



#### **Protect yourself!**

Wear eye and hand protection (cut proof gloves) and also safety boots when working with the system.



### **Attention: Risk of squeezing!**

There is a risk of squeezing in the entire surroundings of the ChainLance, but especially between the metal chain pieces of the supporting ChainLance; also in the area of the reversing sledge, the tensioning wheel, the guiding wheel and between the lifting unit and the chassis.



### **Attention: Laser beam!**

Direct eye contact with the laser beam or reflecting radiation may result in permanent eye injuries. Never look direct into the laser.

Laser Klasse 2

DIN EN 60825-1:2015-07



### **Attention : Risk of tripping!**

If the system will be parked, the supporting ChainLance has to be fully retracted. The supporting ChainLance must not protrude from the system.

Furthermore, it must be assured that any potential strap waste or strap pieces are removed from the floor immediately.



### **Warning:**

#### **Strap tensioning or strapping, danger of jamming and crushing.**

Do not place hands or other body parts between the strap and the packaged goods during the strapping process. Ensure that there are no other persons in the hazardous zone.

#### **For an emergency stop in case of danger (trapped person):**

To release tension (before welding), open the rocker lever.

After welding, cut the strap with a suitable tool (strap cutter)



### ***Warning!***

Following hazards can result in serious injuries:

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#### **Breaking strap, risk of injury**

When being tensioned, the strap may break and rip. Do not stand in line with the strap and wear eye protection.

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#### **Strap ends snapping back, risk of injury**

When cutting the strap, hold the upper portion and stand aside. Do not stand in line with the strap and wear eye protection.

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#### **Supporting ChainLance, risk of tripping**

If the system will be parked, the supporting ChainLance has to be fully retracted. The supporting ChainLance must not protrude from the system.

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#### **Strap waste, risk of tripping**

Make sure any strap waste or pieces of strap, which possibly appeared, will be removed from the floor quickly.

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#### **Sealing head and ChainLance, risk of crushing**

Do not put your fingers into the area of the tension wheel of the sealing head and into the ChainLance.

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#### **Reversing sledge, risk of crushing**

Especially around the entire surroundings of the reversing sledge, there is a risk of squeezing.

---

#### **Hazardous area, risk of crushing and risk of injury**

Make sure before each strapping cycle, that there is no person in the hazardous area (especially of the ChainLance) and nobody can enter that area. This is due, especially for the limited or bad visible area on the opposite site of the pallet (operators view). During strapping, there must not be any hands or other body parts between strap and goods.

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#### **Power source, risk of injury**

Before maintenance or repair works:

Switch off the strapping system by pressing the „OFF“ switch, remove the key from the main switch and unplug the main power cable from the battery pack.

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#### **EX areas, risk of explosion**

The strapping system must not be used in areas with explosive atmospheres.



## **Warning!**

Following hazards can result in serious injuries:

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### **Chain links, risk of squeezing**

There is a risk of squeezing in the entire surroundings of the ChainLance, but especially between the metal chain pieces of the supporting ChainLance, see Fig. 1a and 1b.

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### **Lifting unit and chassis, risk of squeezing**

There is a risk of squeezing in the surroundings between the lifting unit and the chassis, see Fig. 2a and 2b.

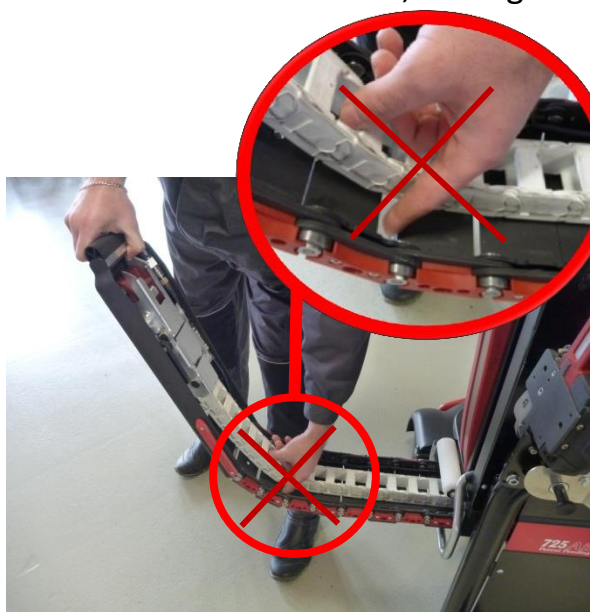


Fig. 1a

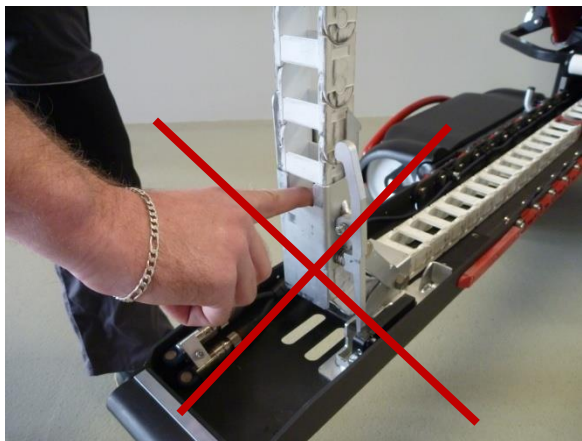


Fig. 1b



Fig. 2a



Fig. 2b



### **Warning**

Following hazards can cause serious injuries:

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#### **ChainLance, risk of tipping**

When the ChainLance is moving upwards on the opposite side of the pallet, it falls towards the operator by its own weight. **Used without paying attention, the ChainLance can fall on the head of the operator and cause injuries.** When using the system, watch out and be concentrated and catch the ChainLance when it falls over.

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#### **Loose and falling packages due to improper strapping**

Check the welding. Never transport improper strapped packaged goods.

---

#### **Changing battery pack, risk of injury**

While changing the battery pack it has to be held by 2 persons. Alternatively, the battery pack can be changed by one single person by using the battery change trolley which is available as an accessory.



### **Caution!**

Following hazards can result in minor or moderate injuries:

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#### **Strap coil, risk of injury**

While changing the strap coil, 2 persons need to transport and lift it, if the weight of the roll is 20 kg or heavier.

---

#### **Tilting danger**

Strapping pallets should, whenever possible, take place in areas with an even surface. When using the strapping system on inclined surfaces, after positioning and before strapping, the brakes of the castor wheels on the strap side have to be locked.

**Attention!**

Avoid damages on the strapping system:

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**Water damages**

For cleaning of the strapping system do not use water or steam.

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**Visual inspection**

Before using the strapping system for the first time, a visual inspection for external damage has to be done.

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**Use only original ErgoPack spare parts!**

Warranty and liability become invalid if other than ErgoPack spare parts are used.

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**Covers**

Do not operate the strapping system if any parts, especially covers, are disassembled. This also applies to all other parts, irrespective whether the operator considers them for security irrelevant and/or unimportant for the function of the system and for working with the system.



**Intended use**

This machine is designed for strapping pallets and was developed and constructed for safe use during this strapping operation.

The machine is designed only for strapping with plastic straps (polypropylene and polyester). Strapping with metal strap is not possible with this machine.

The machine is not designed for the strapping of unpacked food.

The pre-set tension force must correspond to the goods to be strapped (see 6.3). Constructing the machine there was not considered any risk due to damaging of dangerous products or their package.

The machine is not designed for lifting loads or/and persons.

## 3.2 Safety regulations for charger and battery pack

- Check the plug and the cable before each use and have them replaced by a specialist if they are damaged
- Do not use any batteries of other manufacturers, use original spare parts only.
- Keep the connection plug to the battery pack away from non-related objects and dirt.
- Protect the charger from moisture; operate it in dry rooms only.
- Do not open the battery and protect it from shock, heat and fire. Danger of explosion!
- Store batteries/battery pack in a dry frost-proof place. The ambient temperature must not exceed 50°C and must not fall below -5°C.
- Damaged batteries/battery pack may not be re-used.

## 4. Description

### 4.1 Design



Lifting column

Safety strap cutter

Circular disk for strap

Supporting ChainLance with  
guiding ChainLance inside

Fig. 3

Compartment for battery with chassis protection

Lifting device



Fig. 5

Laser

Guiding wheel



Fig. 4

Sealing head

Control panel with joystick and  
colour display

Sliding window with safety switch

Triplex Tool-Lift

Guide rollers with parking brake  
and overrun protection

## 4.2 Control panel of strapping system

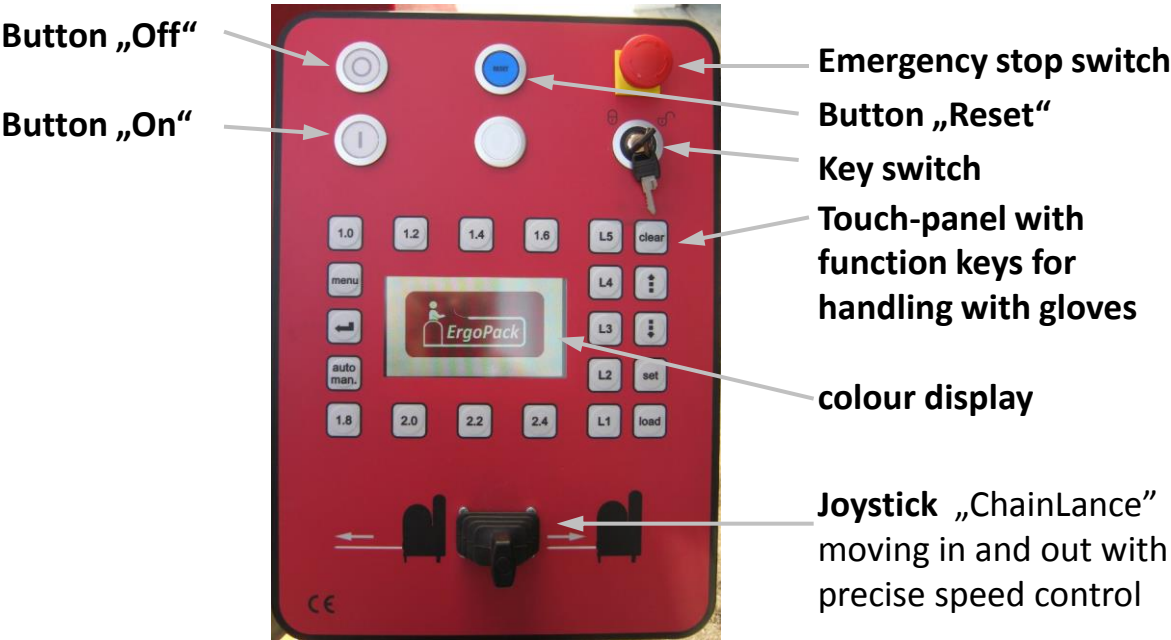
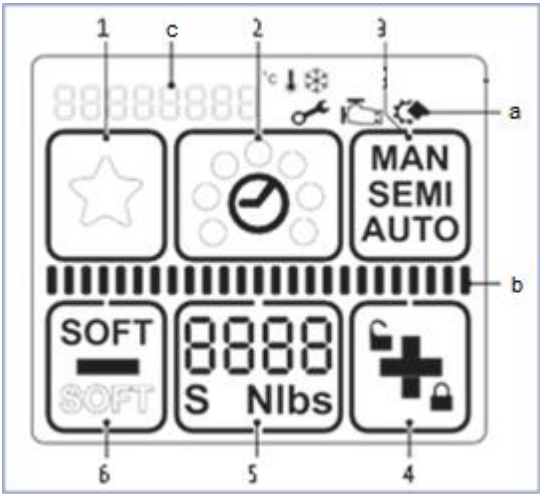


Fig. 6

## 4.3 Control panel sealing head



- 1 „Favourite“
- 2 „Welding time“
- 3 „Operating mode“
- 4 „Plus & Keylock“
- 5 „Tension force“
- 6 „Minus & Soft tension“
- a „Information symbols“
- b Status indicator bar „Tensioning/Welding“
- c Display „Messages“



Display activated.



Welding process is finished, tool can be removed.



Application error: Temporary system error, can be rectified by the operator.



Tool fault: static system error, rectify error. If the error cannot be rectified -> ErgoPack service partner

## 4.4 Indications of the Dual-Charger

Two 12V-batteries are plugged inside the red battery housing. The batteries are charged separately by the Dual charger.

There is a separate LED on the Dual battery charger indicating the charge of each battery.

LED continuous orange	=	quick charge
LED flashing orange	=	battery pack is charged at 80% , current charging flow is reduced until battery pack will be charged at 100%.
LED continuous green	=	battery pack fully charged, charger switches to conservation charge
LED flashing green	=	no battery pack connected, charger ready for use

### Note:

The battery pack only is fully charged, if **both** LED indication lights are continuously green (not flashing!)

**If only one LED is continuously green and the second LED is not green even if the first LED has been continuously green for already several hours, either the corresponding charging circuit inside the charger or one of the two fuses for the batteries' charging circuit are defective. In this case please see point 5.4 „Fuses of the batteries“ on page 25.**



Fig. 8

## 4.5 Safety band switches

To avoid injuries caused by crushed extremities during height adjusting, the crushing edges are protected from grabbing inside by covers or secured by safety band switches.



### Attention!

**The system may not be used if any parts, especially covers, are dismounted. This applies also to all other parts, independent if the operator considers them as not safety relevant and/or unimportant for the function and operation of the machine.**



Fig. 9

Safety band switches



Fig. 10



# 5. Installation

## 5.1 Lifting and unloading of the machine

Lift the system from the truck or pallet by the lifting device using a crane or forklift as shown.

Place the system on a flat and preferably even ground and remove the lifting device by taking out the lower locking pin.

Make sure the brakes of both guide rollers are blocked (pedals are in upright position):



Fig. 11a



Fig. 11b



Fig. 12a



Fig. 12b



Fig. 13a



Fig. 13b



### **Warning!**

Only the lifting device delivered with the system may be used for lifting the system. Any other lifting method means danger for man and system. For using the lifting device, the pre-set strapping height must not exceed 10 cm (see 6.10). The lifting device has to be removed prior to any operation of the system.

## 5.2 Battery Charger

The main voltage must comply with the details on the type plate.

The charger is only suitable for charging the provided 24 V lead battery.

The battery may be charged at any time , independent of its state of charge.

There is no memory effect.

## 5.3 Charging the Battery Pack

- 1) Connect the charger to the main voltage
- 2) Open the battery cover (1) (Fig. 14a).
- 3) Turn the red ring (3) of the plug (4) on the battery pack (2) to the left (Fig. 14b)
- 4) Disconnect the plug (4) from the battery pack (2), (Fig 14b)



### **Note!**

Before using the system for the first time, a visual inspection for exterior damage has to be done.



### **Warning!**

Charge the battery only with the ErgoPack Dual 3-step charger through the blue socket. Always charge the battery pack completely, until both control lights are continuously green. Lifting of the charger only by two persons or by the ErgoPack battery-change trolley. (Fig. 15, available as accessory)



Fig. 14a

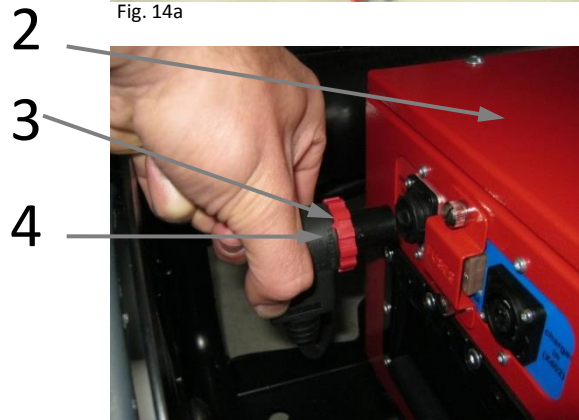


Fig. 14b



Fig. 15

5.) Put the blue plug (5) of the charger into the blue charging socket of the battery pack as shown in Fig. 16 by holding it 45° turned to the lower left corner. Then turn the plug clockwise to a horizontal position until it is locked.



Fig. 16



Fig. 17

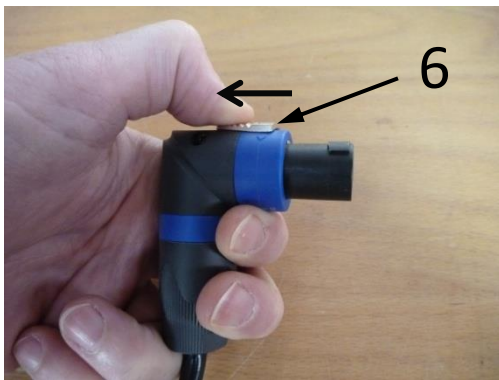


Fig. 18

6.) To remove the blue charging plug after charging is completed, please proceed as follows:

- a) pull the silver locking bar (6) backwards
- b) turn the plug counter clockwise by 45°
- c) remove the plug



**Note!**

The battery pack can be charged inside the system, but you also can take it out. Charging the battery pack while operating the system is not possible.

The charging time is approx. 8 hours. The battery pack is only fully charged if **both** LEDs of the charger are continuously green!

The maximum charge flows if the battery pack temperature is between 5 – 40°C. Avoid battery temperatures below 0°C when charging.

**The longest life span will be achieved, if the battery pack is charged daily and not operated until the control unit switches off. Battery pack not being used for a longer time (e.g. weekend) should always stay connected to the charger. The charger is automatically switching to conservation charge when the battery pack is full. Any overcharging is impossible.**



# 5.4 Fuses of the battery

The battery pack has three circuits. Each circuit is protected by a separate fuse. The fuses are placed behind the red cover marked „FUSES“. Unscrew the two screws to remove the cover.

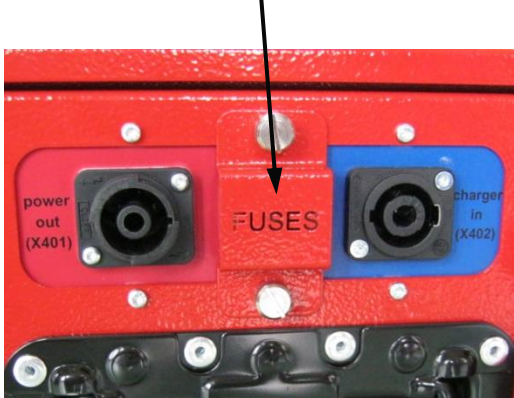


Fig. 19

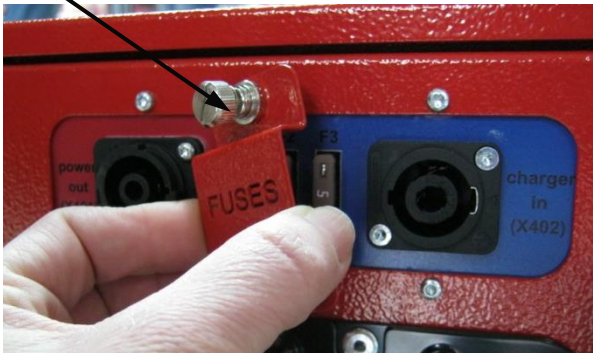


Fig. 20

## Circuit 1:

24V- output to strapping system

## Circuit 2+3:

2 x12V- input from charger (both circuits operated via the blue plug)

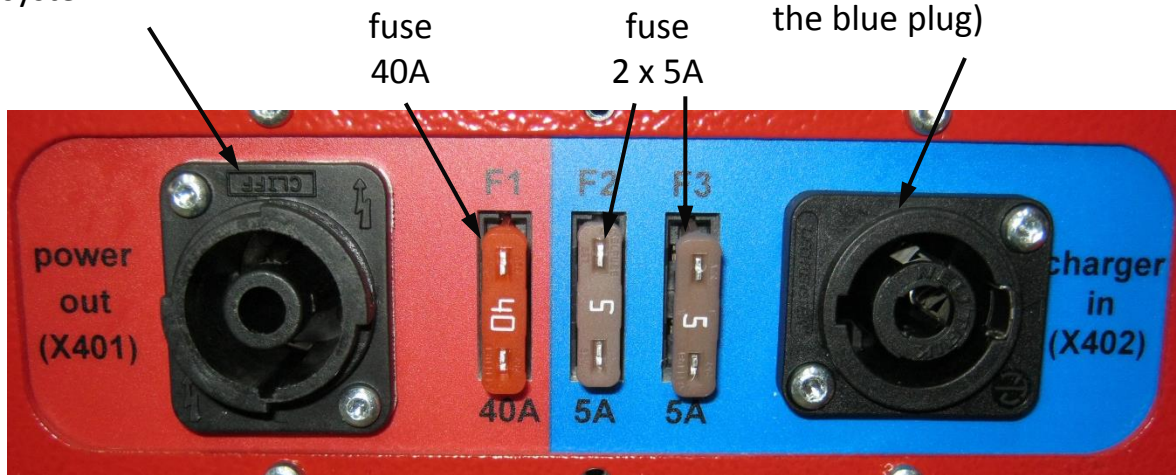


Fig. 21



## Note!

Only circuit 1 is necessary for the operation of the system. For charging the battery pack the circuits 2-3 are needed.

In case there is no possibility to start operation with the control panel in spite of full battery pack, either the key switch is turned to position „off“ (to the left) or the fuse 40 A of circuit 1 of the battery pack is not working. All three fuses are standard automotive fuses.

# 6.Operation

## 6.1 Setting strap width at the sealing head

The sealing head can be used with different strap widths:

ErgoPack Air 713-580: 9 – 10 mm oder 12-13 mm

ErgoPack Air 726-580: 12 – 13 mm oder 15 – 16 mm  
9 – 11 mm (optional)

ErgoPack Air 745-580: 15 – 16 mm oder 18 – 19 mm

The setting of the strap width is explained using the example of model 726-580. The setting of the strap width with the models 713 -580 from 9-10 mm to 12-13mm and 745-580 from 15-16mm to 18-19mm works accordingly.

### a) Change strap width from 12–13 mm to 15–16 mm

- Switch the strapping system off
- Release three cylinder screws Torx (6). Lift the rocker lever towards the handle, release cylinder screw Torx (7) and remove strap guide rear 13mm (8).
- Remove side cover (5).
- Release counter-sunk screw Torx (2) and remove strap guide front 13 mm (1).
- Release counter-sunk screw Torx (4) and remove strap guide front 13 mm (3).
- Release cylinder screw Torx (10) and remove strap guide rear 13 mm (9).
- Fit side cover (5) (secure cylinder screw with screw locking varnish "medium-tight". Install strap guide rear 16 mm (8).

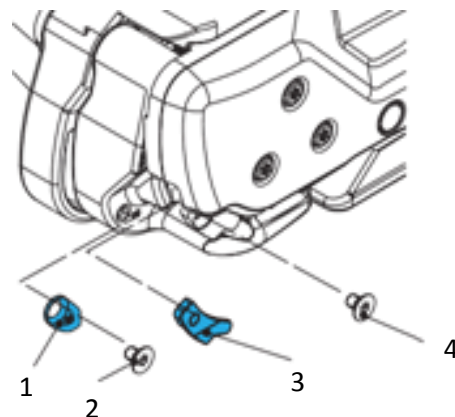


Fig. 22

### b) Change strap width from 15-16mm to 12-13 mm

- Release three cylinder screws Torx (6). Lift the rocker lever towards the handle, release cylinder screw Torx (7) and remove trap guide rear 16 mm (8).
- Remove side cover (5).
- Fit strap guide front 13 mm (1) (secure counter-sunk screw with screw locking varnish "medium-tight").
- Fit strap guide front 13 mm (3) (secure counter-sunk screw with screw locking varnish "medium-tight").
- Fit strap guide rear 13 mm (9) (secure cylinder screw with screw locking varnish "medium-tight").
- Fit side cover (5) (secure cylinder screw with screw locking varnish "medium-tight"). Install strap guide rear 13 mm (8).

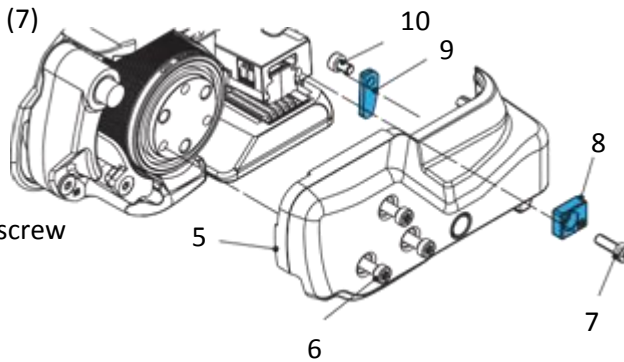


Fig. 23

## 6.2 Switch-on the control unit

### 1. step

- Charge battery pack as described in 5.3
- Connect the plug of the power cable (3) into the red-rimmed socket (4) of the battery pack and lock it by turning the red ring (2) clockwise (right).
- Make sure that the emergency stop (9) is not pressed (unlock by turning clockwise/right).
- Press button „I“ (11)
- Once the Logo „ErgoPack“ has disappeared, follow the instructions on the display.

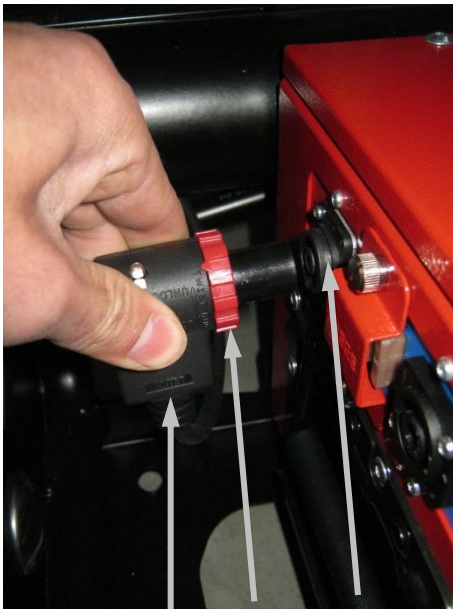


Fig. 24

3 2 4



Fig.25

8

9  
10  
11

### 2. step

The control unit is in the teaching mode.

Now move the joystick (8) completely to the „move out“ or in the „move in“ direction and keep it pushed until the display shows „main menu“. The control unit is now ready for operation.

The 7 segment indicator lights up on the display of the sealing head. Also the sealing head is now ready for operation.

## 6.3 Setting strap tension range at the sealing head

Two strap tension ranges can be set at the sealing head:

**NORMAL** = Standard tension range for PET strap

Air 713-580 = 400-1200 N

Air 726-580 = 900-2500 N

Air 745-580 = 1300-4500 N

**SOFT** = Soft tension range for PP strap

Air 713-580 = 150- 750 N

Air 726-580 = 400-1360 N

Air 745-580 = 400-1600 N

Press „Soft“ button (a).

The soft mode is **deactivated** when the „SOFT“ display (b) changes position and is shown outlined.



Press „Soft“ button (a).

The soft mode is **activated** when the „SOFT“ display (c) changes position and is shown in bold.

The displayed tension force is reduced correspondingly.

On the left under the tension force an "S" (d) also appears.

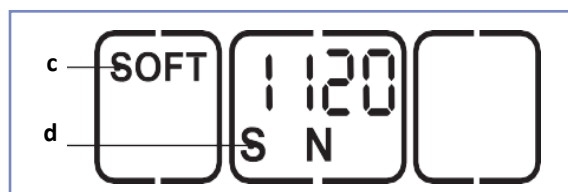


Fig. 26



### **Attention!**

Always use the SOFT tension mode when working with PP-strap!

By using the Soft mode, the tension wheel accelerates more slowly and avoids excessive strap waste when sealing with PP strap.

## 6.4 Setting strap tension at the sealing head

The set tension force is displayed continuously when the tool is ready for operation.

Press „tension force“ button (2).

- The set tension force flashes for 5 seconds.
  - The buttons + (1) and – (3) appear.
  - Unused displays disappear.
- Press + (1) or – (3) button until the required tension force is displayed.
- The status indicator bar (4) shows the set tension force in relation to the possible maximum value.
- Save: Press „tension force“ button (2) or wait for 5 seconds.

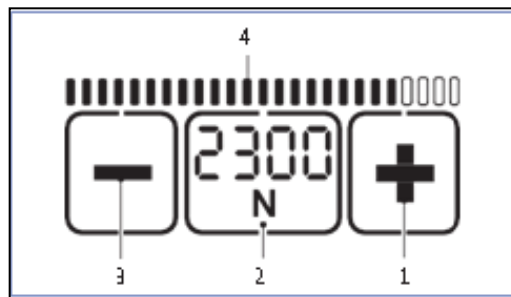


Fig. 27



### **Note!**

- Switch between display in „N“ or „lbf“: Press the flashing „tension force“ button (2) for two seconds.
- Every time the button is pressed an acoustic signal confirms the action.
- The tension force is displayed continuously when the tool is operational.
- Setting soft tension

<b>713</b>										
Standard	N*	400	500	600	700	800	900	1000	1100	1200
	lbf*	90	110	135	155	180	200	225	250	270
Soft	N	150	225	300	375	450	525	600	675	750
	lbf*	33	50	67	85	100	120	135	150	165
<b>726</b>										
Standard	N*	900	1100	1300	1500	1700	1900	2100	2300	2500
	lbf*	200	250	290	340	380	430	470	520	560
Soft	N	400	520	640	760	880	1000	1120	1240	1360
	lbf*	90	115	145	170	200	225	250	280	305
<b>745</b>										
Standard	N*	1300	1700	2100	2500	2900	3300	3700	4100	4500
	lbf*	290	380	470	560	650	740	830	920	1000
Soft	N	400	550	700	850	1000	1150	1300	1450	1600
	lbf*	90	120	160	190	225	260	290	325	360

(rounded values)

\* N = Newton, lbf = pound-force per square inch



### Warning!

Adjusted tension force must relate to the packaged goods to be strapped. Possible hazards caused by damages of dangerous goods or their packaging are not considered with the design of the strapping system.

## 6.5 Setting mode of operation at the sealing head

Press „Operating mode“ (1) button.

- Unused displays disappear.
- The currently set operating mode flashes for 5 seconds.
- + and – appear.

Press button + (2) or – (3) until the required operating mode is displayed.

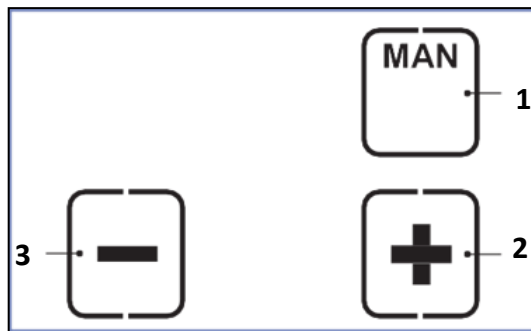


Fig. 28

### MAN/ SEMI/ AUTO

By pressing the „Operating mode“ button (1) again, or after waiting 5 seconds, the set mode is saved. Each operating mode can also be selected for the tension range „Soft tension“ (Section 6.3).

- **MAN = Manual**

The tensioning button must be pulled and held until the desired strap tension has been reached. The welding button must then be briefly pressed so that the straps are welded and the upper strap is cut off.

- **SEMI = Semi-automatic strapping (standard/factory setting)**

The tensioning button must be pulled and held until the set tension force has been reached. The straps are then automatically welded and the upper strap is cut off. It can be welded manually at any time by pressing the welding button.



- **AUTO = Fully automatic strapping\***

The tensioning button has to be pulled (touched) once only. This triggers the tensioning process. Once the set tension force has been reached, the straps are automatically welded and the upper strap is cut off.

\* This operating mode AUTO = Fully automatic strapping is factory blocked! Activation only through your ErgoPack service partner possible.



### **Warning!**

#### **Strap tensioning or strapping, danger of jamming and crushing**

Do not place hands or other body parts between the strap and the packaged goods during the strapping process. Ensure that there are no other persons in the hazard zone.

#### **For an emergency stop in the case of danger (trapped person):**

To release the strap tension (before welding), pull the rocker lever. In operating mode AUTO, also the tensioning or welding button can be pressed again. After welding, cut the strap using a tool (strap cutter).

## 6.6 Select favourite\*

The function „favourite“ activates a second settings level, whose parameters can be set freely like those of the main level.

This enables the operator to quickly change from one setting into the other.

#### **Deactivate favourite:**

- Press „favourite“ button (1). The star (2) changes from bold to outlined. All parameters change to the pre-set values of this settings level.

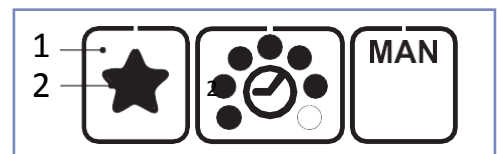


Fig. 28 a

#### **Activate favourite:**

- Press „favourite“ button (1). The star (3) changes from outlined to bold. All parameters change to the pre-set values of this settings level.

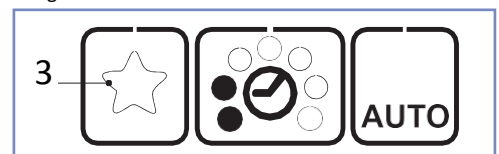


Fig. 28 b

\* The operating mode favourite is factory blocked! Activation only through your ErgoPack service partner possible.



## 6.7 Setting welding time

The set welding time is displayed always by filled dots, when the system is ready for operation.

- Press „welding time“ button (2).
  - Unused displays disappear.
  - The filled dots of the current set welding time flash for 5 seconds.
  - + and – appear.
- Press button + (1) or – (3) until the required welding time appears.
- Save: Press „welding time“ button (2) or wait for 5 seconds.

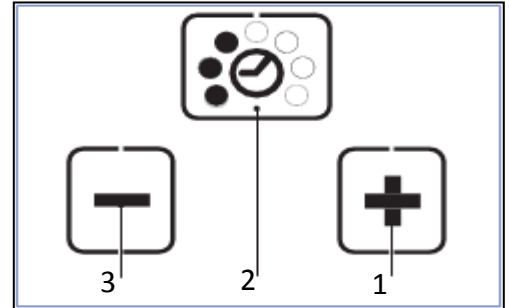


Fig. 28 c

## 6.8 Putting on/changing the strap coil

For putting on/changing the strap coil use the “Load Mode”. The control unit has to be in the main menu and the supporting ChainLance has to be completely inside the system. See also point 6.2 „Switch-on control unit“.



### Attention!

**Make sure the lifting device is removed as described under point 5.1. The electronic height adjustment can only be performed without the lifting device. Otherwise it can lead to damages and injuries.**

Start the menu „Load“ by pressing the button „load“.

You see the following screen at the display:

### Load-Mode

8 steps to change strap roll

‘load’- button = next step

‘clear’- button= back to Main Menu



### Important!

Each next step will be shown by pressing the “load” button.

By pressing the „clear“ button, the “load” mode can be inter-rupted at anytime and you can go back to the main menu.

### Step 1

Keep ‘load’-button pressed until upper switch off position is reached

‘load’- button = next step

‘clear’- button = back to Main Menu

**Follow now all 8 steps.**

## Upper switch-off position reached

### Step 2

Put on a new strap roll

'load' - button = next step

'clear' - button = back to Main Menu



Fig. 29

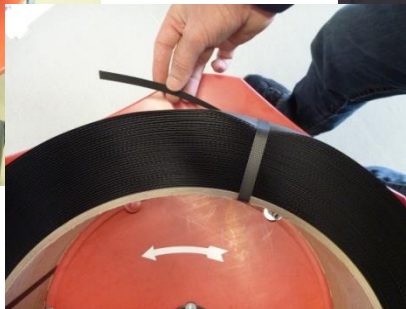


Fig. 30



Fig. 31

### Step 3

Open sliding window and push the strap through the yellow slot.

'load' - button = next step

'clear' - button = back to Main Menu



Fig. 32



Fig. 33



#### Step 4

Slide the strap through the clamp lock located in the red chain link and close the sliding window again.

'load'- button = next step

'clear'- button= back to Main Menu



Fig. 34



Fig. 35



Fig. 36

### **Step 5**

Keep 'load' button pressed until step 6 will be displayed.

(The system goes fully down to reset height measurement, thereafter up again by approx. 10 cm)

'load'- button = next step

'clear'- button= back to Main Menu

### **Step 6**

Keep 'load' button pressed until chain feed stops

'load'- button = next step

'clear'- button= back to Main Menu



Fig. 37

### Step 7

Take the strap out of the clamp lock and keep the strap tensioned in you left hand. With your right hand simultaneously press 'load' button until chain feed stops.

'load'- button = next step

'clear'- button= back to Main Menu



Fig. 38



Fig. 39



### Step 8

Feed strap through the eccentric lock located at the top of the ChainLance and keep the strap slightly tensioned with your left hand. Simultaneously press 'load' button until ChainLance is fully retracted and load-Mode is finished.



Fig. 40



Fig. 41



Fig. 42



### **Attention!**

Make sure the strap remains tensioned continuously while the ChainLance is moving back, in order to avoid the strap being pushed back into the system by the ChainLance.

As shown below, form a loop and place the overlapping strap through the slot for strap fixture

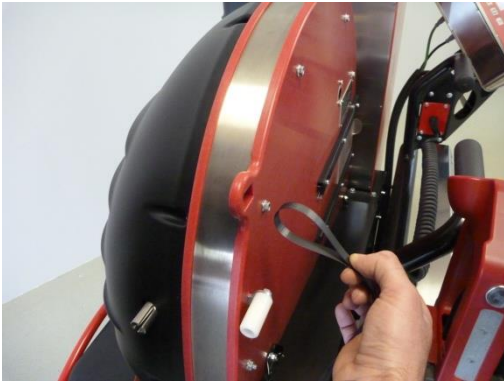


Fig. 43

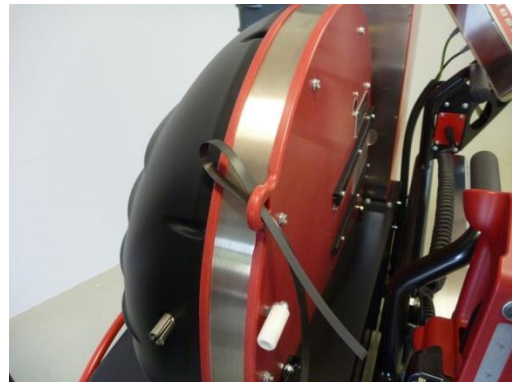


Fig. 44

Your ErgoPack „Air“ is now almost ready for strapping – only adjust pallet width and strapping height and you are ready to go!

The next pages will show you how easily and quickly this is done.



## 6.9 Setting pallet width

Your ErgoPack Air disposes of the world's first Double-ChainLance system with automatic pallet width detection.

### How is it working:

The white chain (guiding ChainLance) threads the strap through the pallet and back up again on the opposite side of the pallet, back into the hand of the operator.

The guiding ChainLance is kept at the adjusted strapping height on its horizontal way through and underneath the pallet by the black aluminium chain (supporting ChainLance).

As soon as the reversing unit at the front end of the supporting ChainLance has passed completely underneath the pallet, the supporting ChainLance will be locked by a magnet locking bar.

As the guiding ChainLance continues to move out, the reversing unit turns to a vertical position and the ChainLance finally brings the strap up at the back side of the pallet and over it back to the operator.

How far the supporting ChainLance moves out until it is locked by the magnet locking bar (= width of pallet) can be set manually. The width can also automatically be detected by the ultrasonic sensors located next to the reversing unit.



Fig. 46



Fig. 45

- Magnet locking bar
- Guiding ChainLance
- Reversing unit
- Supporting ChainLance
- Ultrasonic sensors
- Safety band switch

Press the button „auto/man.“ to switch between manual setting and automatic detection of pallet width. The selection is shown on the display in the main menu. The manual mode shows the set pallet width (e.g. 1,6 m), the automatic mode shows „auto detect“.

**Important: If the pallet width is 2,0 m or wider, a support point for the supporting ChainLance between 1,0 m and 1,8 m is necessary (best: wooden for low wear out, like pallet board).**

Display  
“auto detect” or  
pallet width “1,0 m-2,4 m”

Button  
auto/man

Buttons  
1.0 m – 2.4 m

Main menu	
Pallet width: detect	auto
L5:	56,0 cm
L4:	22,5 cm
L3:	51,1 cm
L2:	1,5 cm
L1:	0,0 cm
<b>Present height:</b>	<b>10,0 cm</b>

Fig. 47



### **Important information for the function „automatic detection of pallet widths“**

The two ultrasonic sensors at the front end of the supporting ChainLance are sending out cone-shaped ultrasonics to the top. The cone of radiation is inclined to the front by 7° and has a height of approx. 1,20 m.

The sensors will recognize if the Double-ChainLance is underneath the pallet. The ChainLance is moving out continuously, as long as the operator is pushing the joystick in the „Move out“ direction and the sensors register an object situated within the reflecting cone. (see picture 48/49).

**As long as the sensors register an object within the reflecting cone, the magnet locking bar cannot lock the support ChainLance. This would lead to the reversing unit folding up the below the pallet which could lead to damages at the reversing unit and the support ChainLance.**

As soon as the reversing unit and the sensors located at its side have passed the pallet underneath and appear at the opposite side, the magnet locking bar will get the signal to lock the support ChainLance if there is no object left in the reflection cone. The magnet locking bar will not lock the supporting ChainLance before it moved out 0,80 m to make sure the reversing unit is not folding up between the system and the pallet already.

#### **This means**

- **in „Automatic width detection“-mode:**  
The supporting ChainLance is locked by the magnet locking bar to fold up the reversing unit.
- **in „Manual width setting“-mode:**  
The support ChainLance is moving out until the manually set pallet width, which is shown in the main menu, is reached. Thereafter, the magnet locking bar locks the supporting ChainLance and the reversing unit folds up.

Also if used in “manual width setting-mode” the ultrasonic sensors check if the reversing unit completely passed the pallet. Only after they give the signal that the pallet is cleared, the lock of the magnet locking bar will be released.



### Attention!

If there is an object or a person behind the pallet recognized by the reflecting cone, the magnet locking bar will not lock the support ChainLance. As a result, the support ChainLance continues to move out, despite the fact that the reversing unit already passed the pallet completely.

The ultrasonic sensors cannot differ between a pallet and an object/person!

Reflection cone of the ultrasonic sensors

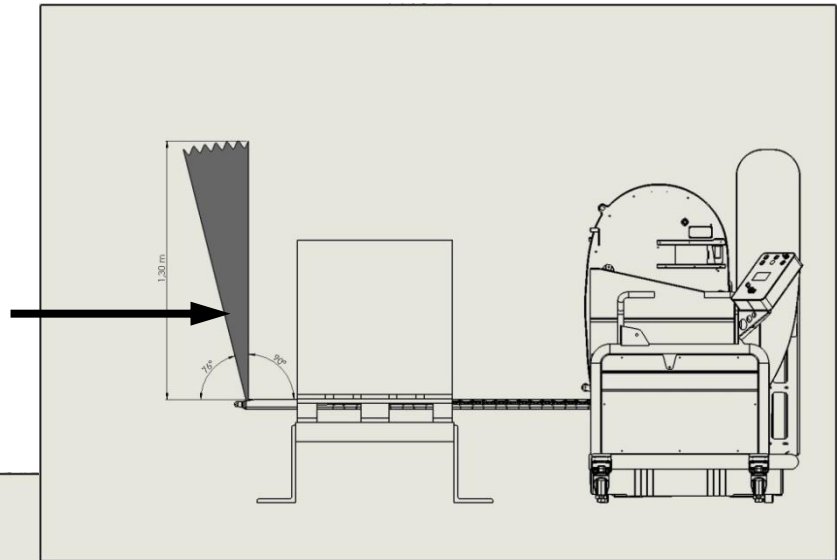


Fig. 48

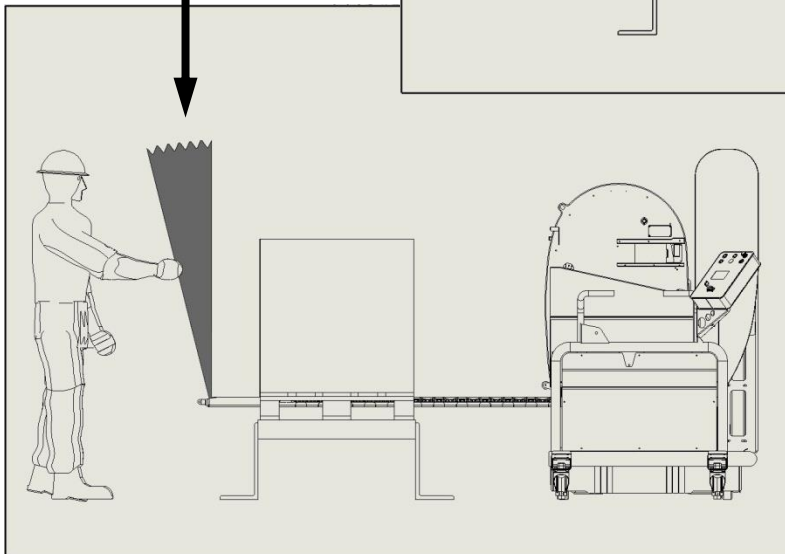


Fig. 49

As soon as the safety band at the front end of the supporting ChainLance is touching an obstacle, the system stops immediately. To start it again the “reset” button has to be pressed. The corresponding information will be shown on the display.

## **WRONG strap position**

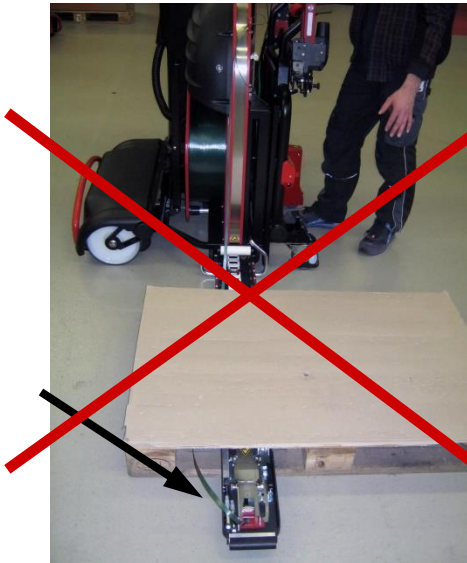


Fig. 50

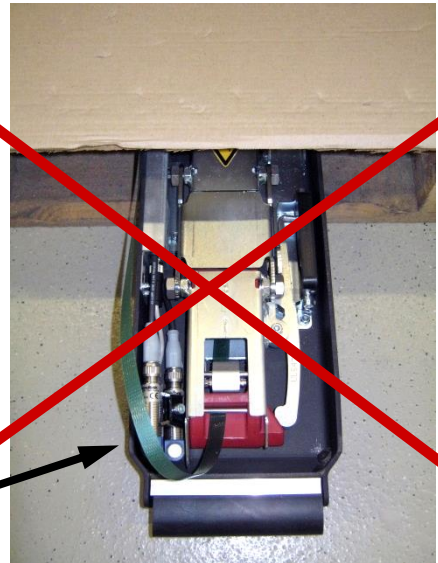


Fig. 51

Strap inside  
the reflecting  
cone of the  
ultrasonic  
sensors

The strap is within the area of the reflecting cone of the ultrasonic sensors and realized as an obstacle. Therefore, the magnet locking bar cannot lock the supporting ChainLance despite the fact that the reversing unit already passed the pallet.

## **CORRECT strap position**

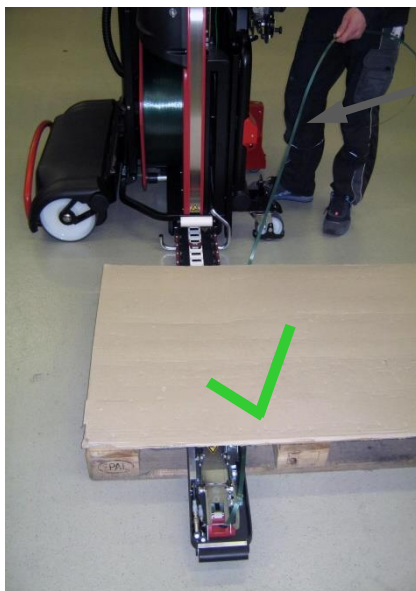


Fig. 52

Hold the strap  
to the left

Strap outside  
the reflecting  
cone of the  
ultrasonic  
sensors

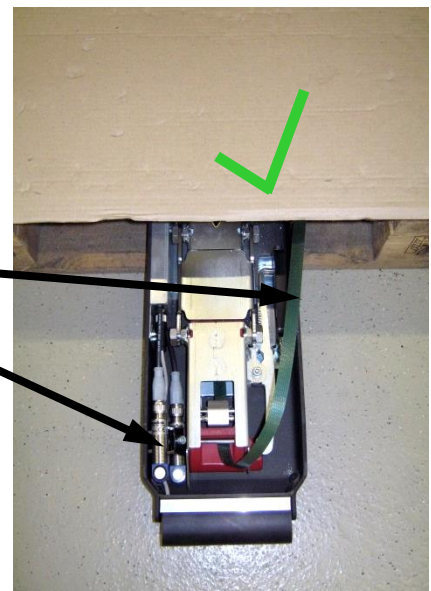


Fig. 53

While the Double ChainLance is moving out, the operator holds the strap to the left and lets it slide through his hand keeping it slightly tensioned. Once the Double ChainLance has moved out by about 0,5 m, you can let go of the strap. There is no more risk for it to get into the reflecting cone of the ultrasonic sensors.



## 6.10 Setting and saving of strapping height

Press the “set” button to open the mode for setting and saving different heights. The currently set height is shown in the display.

Measure the height the support ChainLance has to move out (bottom end) and add about 20 mm.

**The supporting ChainLance always has to be free floating! Neither top nor bottom side should touch the pallet.**

(Exception: Pallets from 2,0 m width, see page 42)

**Example:**

**Measured height: 26,5 cm**

**➔ setting: 28,5 cm**

**Set-Mode**  
Save height positions L1 – L5  
1) Move to required height by pressing  $\uparrow\downarrow$  button  
**present height: 10,0 cm**  
2) Choose required memory L1 – L5  
**Selected height position L: 0**  
3) Press ‘set’-button to store Back to Main Menu: Press ‘clear’

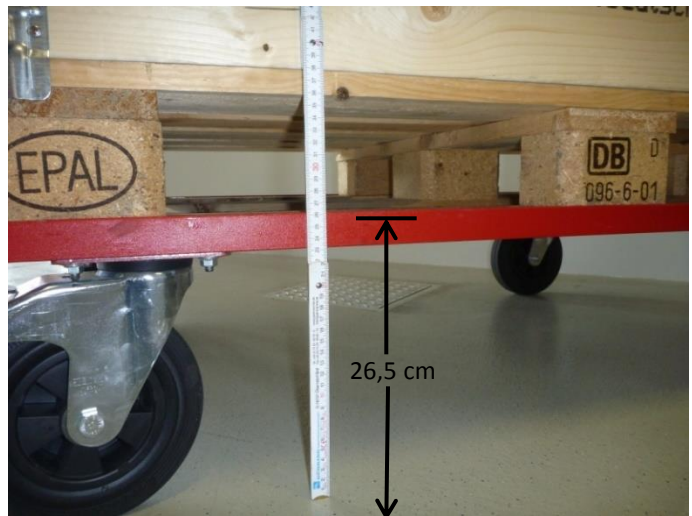


Fig. 54

To set and save the strapping height follow the three steps in the „set“-mode described in the display.

**The double ChainLance has to be fully moved back into the system before setting the pallet height. If the setting of the strapping height in the “set”-mode is activated by one of the two arrows and the ChainLance was not all the way inside the system, the display will show a corresponding information.**

## 6.11 Strapping



### 1. step

Place the ErgoPack Air parallel to the pallet according to the line laser.

For a correct distance, the laser line should run right below the lower edge of the pallet.

Fig. 55

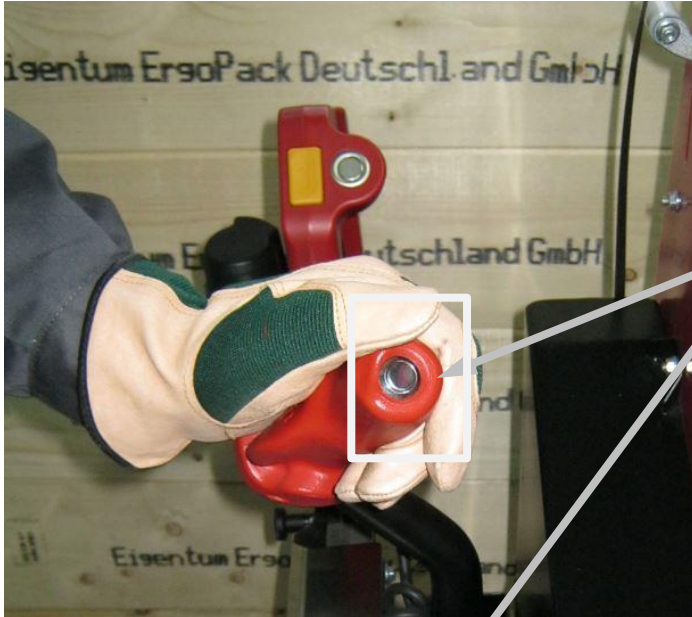


Fig. 56

## 2. step

Press the button of the left handle to move down the guiding wheel.



Fig. 57

The guiding wheel keeps the system parallel to the pallet.

If a pallet needs to be strapped several times, the system will always remain in the same parallel position as it can only be moved for- and backwards.

By pressing the button once more, the guiding wheel moves up and the system can be manoeuvred again freely.





### 3. step

Move the ChainLance out by pushing the joystick to the „move out“-direction.

The ChainLance pulls the strap through under the pallet ...

Fig. 58



...and up again on the opposite side.

Fig. 59

When working in the “manual width setting mode”, the pallet width should be set in a way that the distance between the pallet and the rising ChainLance is about 10-20 cm.

**Note!**

To make sure the ChainLance moves upwards properly, it is important to push the joystick continuously until the ChainLance appears on the other side and falls towards you.



Fig. 60

**Catch the ChainLance at the front edge as shown. Do not let it drop onto the package.**

**As soon as you have caught the ChainLance, let go of the joystick so it moves back to the middle position and the ChainLance stops moving out further.**

**4. step**

Hold the strap with the left hand by the head piece as shown ...



Fig. 61a



Fig. 61b

...and move the ChainLance completely backwards by pushing the joystick in the „move in“ direction.



Fig. 62



**Attention!**

Always keep the strap under a slight tension when moving back the ChainLance. This avoids the strap forming a loop at the backside of the ChainLance which could jam in the reversing unit and lead to malfunctions.

### 5. step

The strap lifter rises automatically after the reversing sledge has moved back into the system.

**Now relax the strap in your left hand – otherwise the strap lifter will not be able to rise.**

The strap lifter will lift the strap to working height so you can reach it without bending.

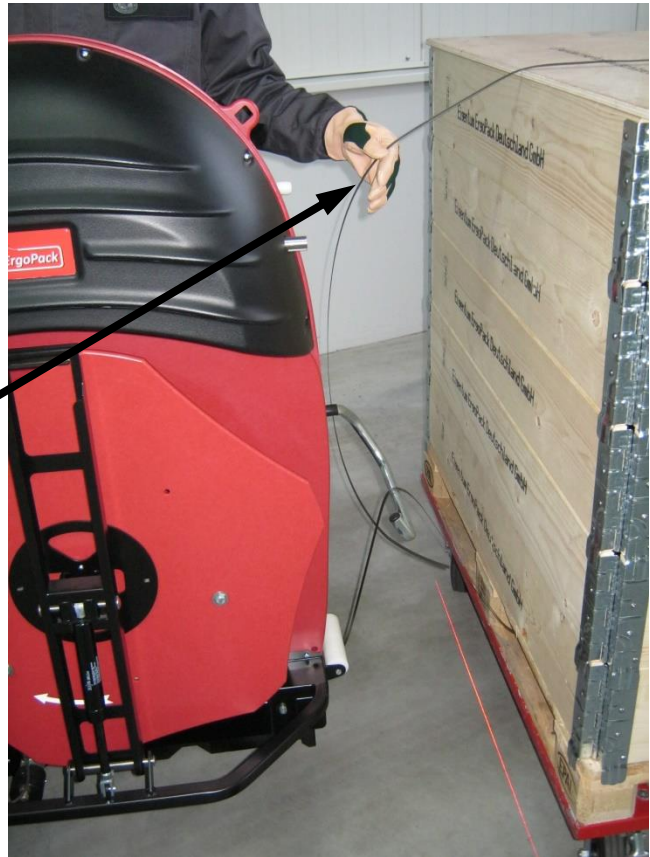


Fig. 63



### **Attention!**

The strap lifter always lifts the strap up to the same height of about 70 cm, relating to the floor where the system and the operator are positioned and independent of the set strapping height. Thereby, the operator can always seize the strap at the same convenient height.

**While the strap lifter is rising, you have to hold the strap loosely in your hand.**

For safety reasons, the system will switch off automatically if you keep the strap under tension in your hand while the strap lifter rises.

The strap lifter will rise again each time you push the joystick in the “move in” direction.

If necessary you can pull out additional strap from the system.  
Do not pull directly at the strap lifter ...



Fig. 64



Fig. 65

...but about 10 cm below it.  
Hold the strap with the whole hand  
and pull it out of the system.  
Simultaneously, you have to relax  
the strap in your other hand!



# 6.12 Tensioning and sealing

## 3. Step

Strap the pallet as described in section 6.11

## 2. Step

Overlap the straps so that the end of the strap lies underneath.



Fig. 66

## 3. Step

Hold then both straps as shown with the **right hand**.

The end of the strap should lie in your hand and not project beyond it!

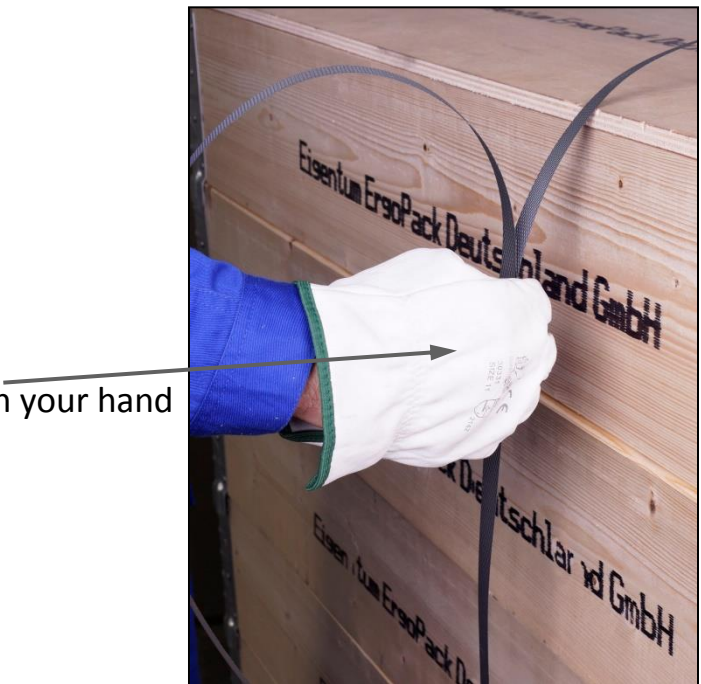


Fig. 67

#### 4. Step

Push the sealing head towards the pallet with the left hand and tilt it forward at the same time so that the sealing head is parallel to the package.

Pull the rocker lever to open the clamp of the sealing head.



Fig. 68

With your right hand you can now feed the strap from the top to the bottom through the slot in the sealing head (similar to a credit card).

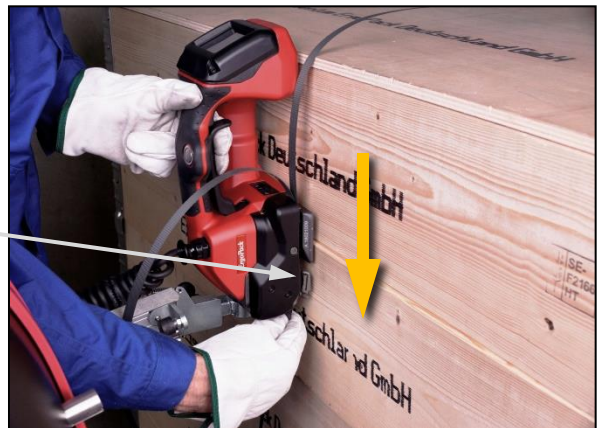


Fig. 69

Now let go of the rocker lever.

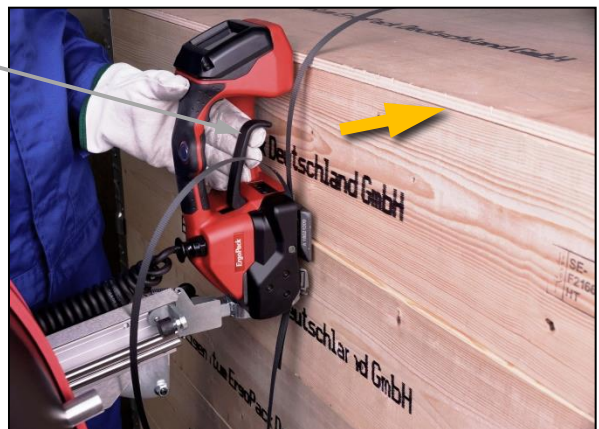


Fig. 70

## 5. Step

The tensioning and sealing of the strap is different according to the set mode (manual, semi-automatic or automatic mode\*) (see also section 6.5.).

### 5.1 Manual tensioning and sealing

Pull the tensioning button (Fig. 71) until the required tension force is reached (see also section 6.3).

Thereafter, press the round welding button (Fig. 72) to weld both straps and to cut off the upper one.



Fig. 71

### 5.2 SEMI-Semi-automatic tensioning and sealing

Pull the tensioning button (Fig. 71) until the pre-set tension force is reached. Afterwards, both straps will be automatically welded and the upper strap will be cut off. You can also weld the straps manually at any time by pressing the welding button even if the pre-set tension force was not reached.

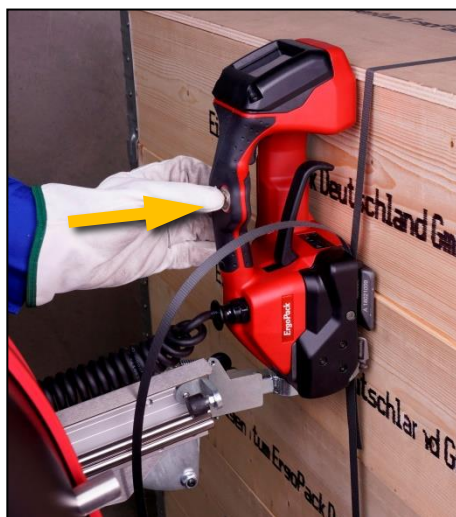


Fig. 72

### 5.3 Automatically tensioning and welding\*

By a brief pulling (touching) of the tensioning button once, the sealing process (tensioning and welding) will be activated. Once the set tension force has been reached, the straps are automatically welded and the upper strap is cut off.

\* This operating mode AUTO = Fully automatic strapping is factory blocked! Activation only through your ErgoPack service partner possible.



#### **Warning!**

#### **Strap tensioning or strapping, danger of jamming and crushing**

Do not place hands or other body parts between the strap and the packaged goods during the strapping process. Ensure that there are no other persons in the hazard zone.

#### **For an emergency stop in the case of danger (trapped person):**

To release the strap tension (before welding), actuate the rocker lever, the tensioning or welding button. After welding, cut the strap using a tool (strap cutter).



The tensioning process is finished, once the indicator bar is filled in fully.

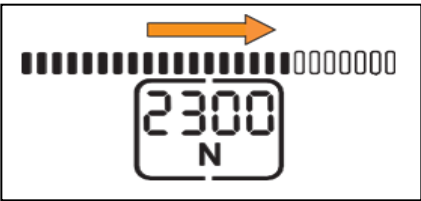


Fig. 73

The welding process is finished, once the indicator bar (1) is filled fully.

The cool down starts (2). After cool down there is a beep and the display lights up green.

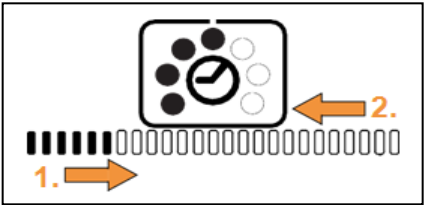


Fig. 74

### 6. Step

As soon as the countdown is finished and the signal has sounded you have to pull the rocker lever towards the handle.



#### **Attention!**

If after pressing the welding button, the welding process does not start, but the sealing head beeps, the tension button was not pressed first.



Fig. 75

### 7. Step

Now slew the sealing head to the left while keeping the rocker lever pulled..



#### **Attention!**

It is recommended to clean the sealing head regularly (at least daily), if there is a lot of strap waste. Especially the tension wheel and the tooth plate have to be checked for damages and kept clean. Please refer to section 7.2

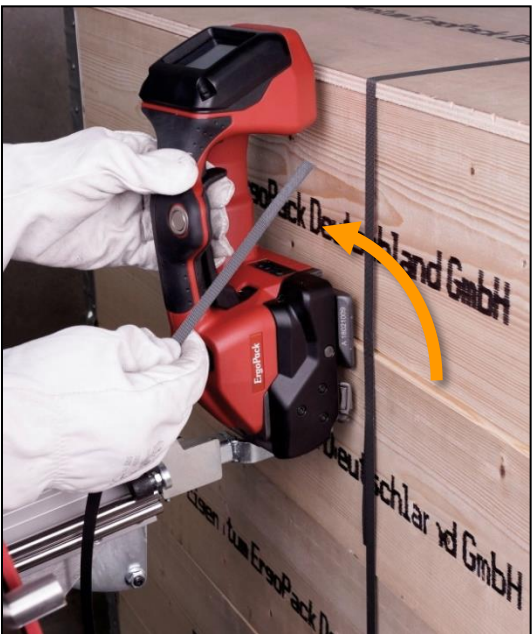
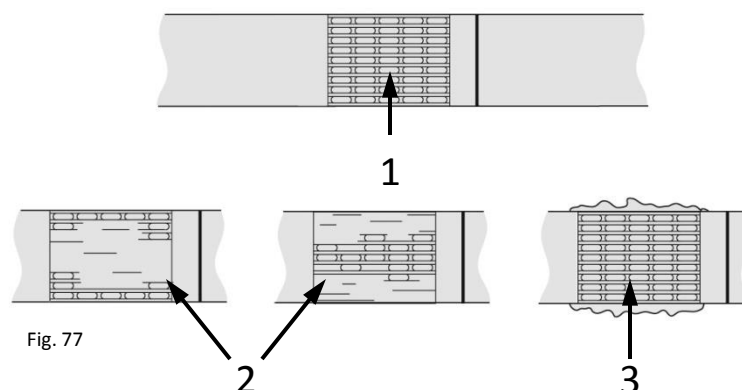


Fig. 76

## 6.13 Sealing control

Control the sealing regularly. The welding time must be checked in accordance with point 6.7 and changed if necessary when the straps are welded badly.



**1 Good welding:** The whole sealed surface has been properly welded without any extra material being squeezed out to the side.

**2 Bad welding:** The surface has been unevenly welded, the selected welding time is too short.

**3 Bad welding:** Surplus material has been squeezed out to the side, the selected welding time is too long.



### ***Warning!***

**Improper welded straps cannot secure the loads and can therefore cause injuries.**

**Never transport or move goods with improper welded straps.**

## 7. Servicing an repair

Your ErgoPack Air is made out of galvanized steel, powder coated steel, stainless steel and ultra wear-resistant plastics and is basically maintenance free.

Clean the outside of the ErgoPack Air with a damp cloth if it is extremely dirty.



### ***Warning!***

For all servicing and repair work the battery pack has to be unplugged and the emergency stop has to be pressed.

### 7.1 Cleaning the guiding ChainLance

Clean the guiding ChainLance with acetone or cleaning solvent if it has become greasy or oily. The support ChainLance does not need any cleaning.

For better protection against dirt, you may spray the guiding ChainLance with a common silicone spray.



### ***Attention!***

Do not put and leave the ChainLance in a cleaning solvent.  
Never use grease, oil or similar lubricants.

## 7.2 Cleaning/replacing the tension wheel at the sealing head

### Cleaning the tension wheel without disassembling

- There is an access hole (78a) in the protection cover below the motor. The tension wheel and the tooth plate can be cleaned with compressed air through this access hole.
- When heavily soiled, the tension wheel has to be disassembled.



Fig. 78

78 a



### **Warning !**

Wear eye protection when cleaning with compressed air!

### Cleaning the tension wheel with disassembling / replacing the tension wheel

Release 4 cylinder screws (Torx) (4), remove strap guide rear (5) and side cover (3).

- Remove tension wheel (1) carefully.
- Remove ball bearing (2) from tension wheel.
- Clean the tension wheel with compressed air.
- If the tension wheel teeth are covered with heavy dirt they must be cleaned carefully with the wire brush (6) supplied.
- Check tension wheel for worn teeth. If a few teeth are broken, replace tension wheel (observe direction, see arrow).

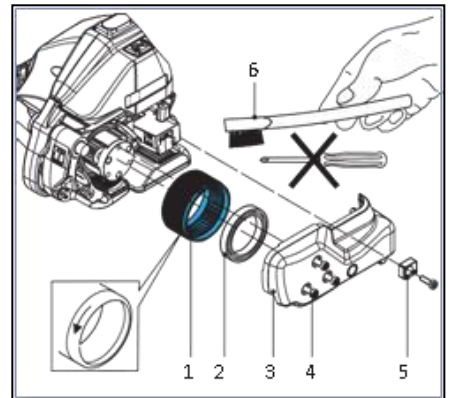


Fig 79

- **Installation** is done in the reversed order of the disassembling.
- Grease interior gear teeth of the tension wheel lightly with Klüber grease GBU Y 131 (Microlube).



### **Attention!**

The tension wheel is extremely sensitive when it comes into contact with hard, especially metallic objects. A hard object, such as a screwdriver or similar, must not be used under any circumstances whatsoever for cleaning. The tension wheel must not be cleaned in an installed state when it is rotating. Risk of breakage teeth.

## 7.3 Cleaning/replacing the tooth plate at the sealing head



### **Warning !**

Wear eye protection when cleaning with compressed air!

- Remove pan head screw (1).
- Lift the rocker lever towards the handle and remove tooth plate (2).
- Clean tooth plate with compressed air.
- If the tooth plate teeth are covered with heavy dirt, they must be cleaned carefully with the wire brush supplied.
- Check tooth plate for worn teeth, if necessary, replace tooth plate.
- **Installation** is done in the reversed order of the disassembling.
- Secure pan head screw (1) with screw locking varnish "medium-tight".

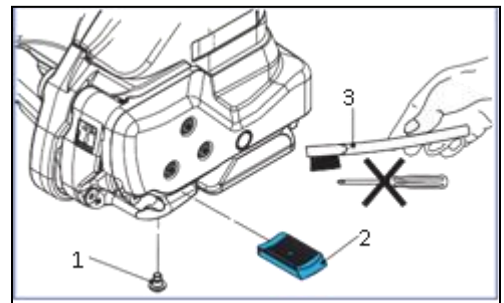


Fig. 80



### **Attention!**

The tooth plate (2) must be placed so that it can move freely in the rocker!

## 7.4 Replacing the cutter at the sealing head

- Release 4 cylinder screws Torx (3), remove strap guide rear (4) and side cover (2).
- Release cylinder screw Torx (5), take care that you do not loose the compression spring (7), remove knife (1) with flanged bushing (6) and replace knife.

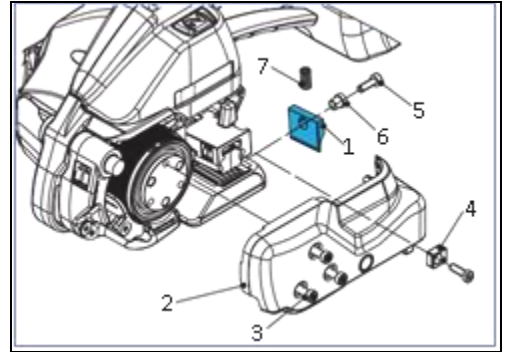


Fig. 81

- **Installation** is done in the reversed order of the disassembling.
- Before installing the knife (1), check that the compression spring (7) on top of the knife is still mounted.
- Secure the pan head screw (5) with screw locking varnish "medium-tight".

## 7.5 Cleaning the ultrasonic sensors

If the pallet width is not recognized correctly anymore while the automatic pallet width mode is used, possibly one or both ultrasonic sensors are dirty or covered by an object (e.g. piece of wood, cardboard etc.)

Remove the object and/or the dirt.

For cleaning, just wipe with your finger over the round, white radiation points located at the front end of the sensors.



Fig. 82

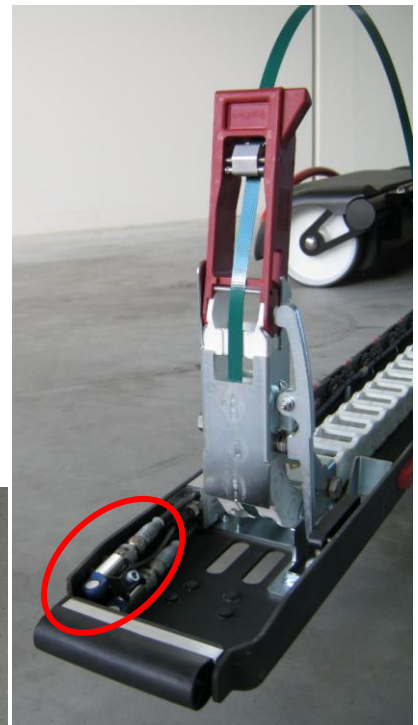


Fig. 83

## 8. Save Moving and Parking

### **Moving the system**

The system can be moved with the two ergonomically optimized handles. Before moving the system, the brakes at both guide rolls have to be released.

### **Parking the system**

After the system was parked, the brakes at the two guide rolls of the system have to be locked in order to avoid any accidental movement. Furthermore, the ChainLance has to be completely moved in, the key at the control unit turned left and removed and kept safely from access of unauthorized persons.

## 9. Spare parts lists

You will find spare parts lists and exploded drawings as well as the wiring plan on our website **[www.ergopack.de](http://www.ergopack.de)** under “downloads” as PDF file.

**Please pay attention to type and serial number of your system for the selection of the correct spare parts list.**

Please always state the number of the article when ordering spare parts (not the position number of the part on the exploded drawing).