

Operating Manual  
Hot Melt Applicator

# Tec 4500B / Tec 4500S



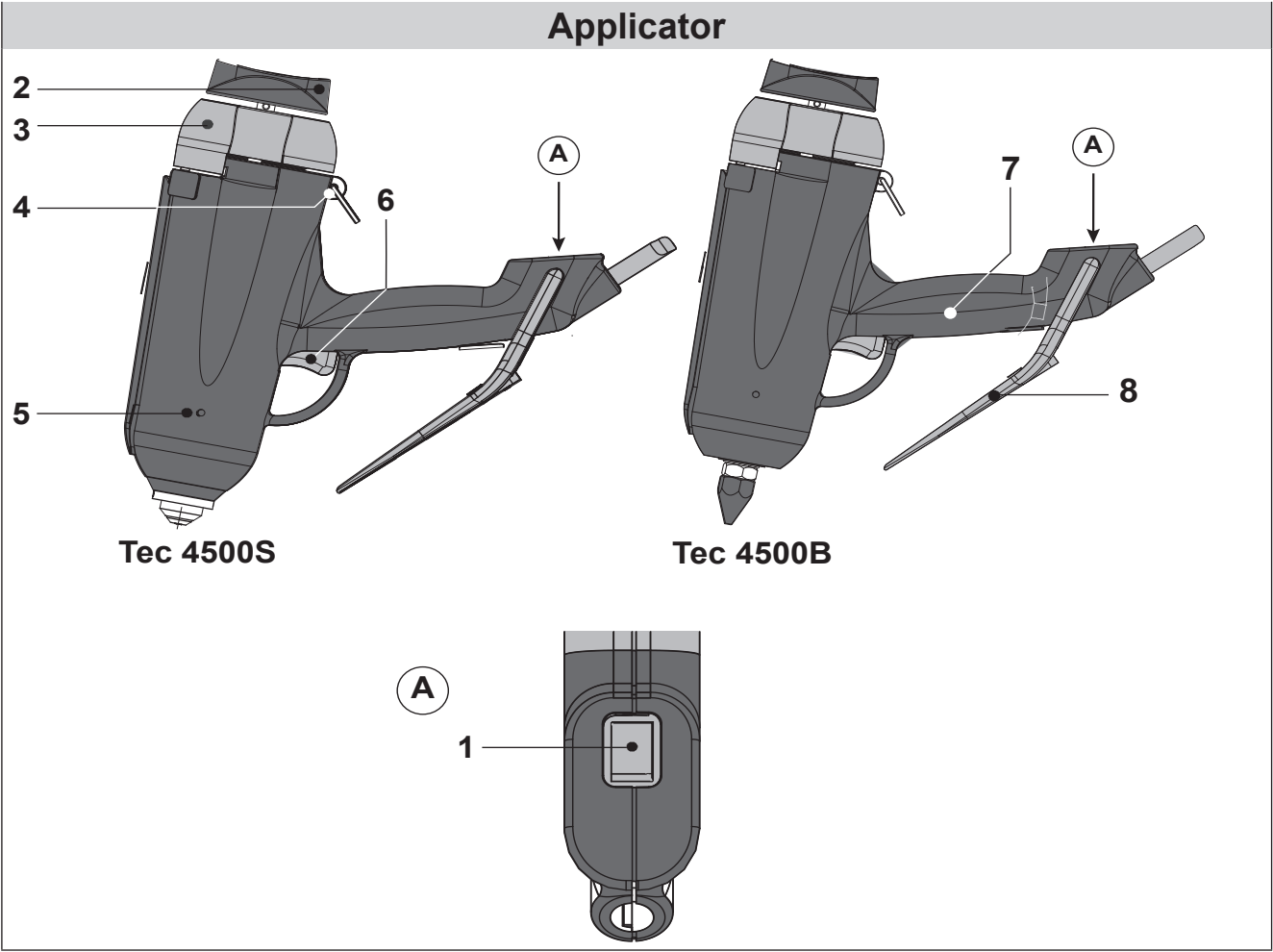
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Pos.	Description
1	Start/Stop button
2	Lever
3	Closure cap
4	Suspension hook

Pos.	Description
5	Spray air choke
6	Trigger
7	Handle
8	Stand foot

## 1 General

Please read this Operating Manual through carefully and completely before first using the Applicator. Pay particular attention to the safety instructions in Section 2.

This Operating Manual must always be within easy reach for any user.

### 1.1 Scope of use

The Tec 4500B/Tec 4500S Applicator is for the melting and metered discharge of melts (thermoplastic substances such as hot-melt adhesives, waxes, etc.) as a bead (Tec 4500B) or spray-on coating (Tec 4500S) using interchangeable application tools (use as intended).

### 1.2 Technical data

Model	Tec 4500B	Tec 4500S
Kit includes	Applicator, toolset	
Weight [kg]	~1.25	~1.45
Power connection	230VAC or 110-120 VAC, 50/60 Hz, earthing-pin plug	
Power requirement [W]	600	
Power consumption [A]	2.6	
Protection (as per DIN IEC 34 T5)	IP30	
Safety class (as per DIN VDE 0720)	I (safety earth terminal)	
Temperature control	Bimetal	
Temperature limitation [°C]	thermal cut-out (153 ±5)	
Operating temperature [°C]	180 constant	
Temperature constancy [°C]	±7	
Factory presetting [°C]	180	
Warm-up time [min]	~10.0	
Hot-melting capacity (dependent on melt) [kg/h]	with cartridge: 3.2 with granulate: 1.3	
Capacity of melt reservoir [ml]	200	
Conveyor system	compressed air	
Compressed-air connection [bar]	max. 6 The compressed air must be condensate- and acid-free	
Operating pressure [bar]	1.5...6.0	
Air consumption (at 5 bar operating pressure)	1 l per trigger actuation	max. 1 l/s
Nozzles (standard)	cone nozzle Ø 1.5 mm	swirl spray head Ø 1.5 mm
Length of supply line with electrical and pneumatic connections [m]	3.0	
Recommended melting stock	Tecbond hot-melt adhesives in cartridge or granular form	

## 2 Safety instructions

### 2.1 Potential hazards



#### **Danger!**

Never point the operation-ready device at people.  
Danger from high pressure!



#### **Burn Hazard**

Nozzle and molten adhesive can be over 200 °C hot.  
Wear heat-resistant gloves if contact is unavoidable.



#### **Risk of Explosion!**

When working with oxygen or combustible gases there is risk of explosion!



#### **Odour nuisance!**

Hot-melt adhesives give off fumes which can cause odour nuisance – so ensure adequate ventilation.  
Improper use may, in isolated cases, lead to irritation of the mucous membrane. In this case seek immediate medical advice!

### 2.2 Instructions for safe operation

Guard against malfunctions and operating errors by always following these instructions precisely:

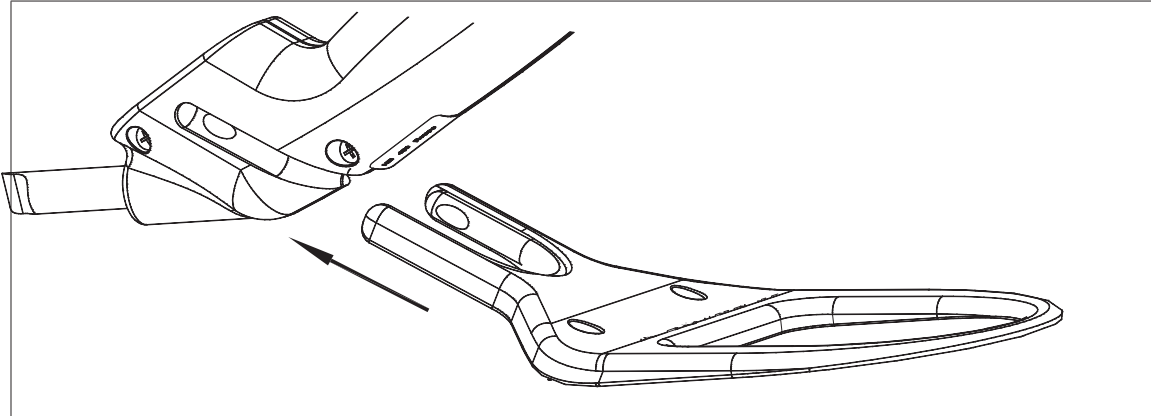
- In no circumstances may the maximum permitted operating pressure (6 bar) be exceeded.
- Remove combustible or heat-sensitive objects from the area of the nozzle.
- When warm the device must be put down on the stand foot (8) or, alternatively on the working console (see section 10, Accessories). It must not be laid on its side. Otherwise melt may escape uncontrolled through the vent holes and present a burn hazard.
- Never operate the trigger (6) forcibly.
- Protect the device from moisture and damp (protection against electric shock).
- Observe the instruction leaflet for the hot-melt adhesive (protection against processing errors).
- Operate the device only with the nozzle pointing downwards. It must not be operated above head height!
- Unplug from the mains before performing any operation on the device (servicing, cleaning).
- The device must be powered only from sockets with a protective conductor.
- Any extension cable used must have a protective conductor. Check that the protective conductor is undamaged before use.
- Unplug from the mains after each use. Allow the device to cool down completely before putting it away.
- If you notice any damage to the device or leads, unplug from the mains immediately. Have the device promptly checked over by an expert. It must not be used again until it has been properly repaired (see Sections 6 and 7).

### 3 Starting

#### 3.1 Connecting up

To connect up the device proceed as follows:

1. Mount the stand:



*Fig. 3/1: Mounting the stand foot*

- To do so, insert the stand foot in the recess at the housing.
  - The stand foot must engage.
2. Place the device on the base and stand foot.
  3. Connect the device to a pressure regulator (see accessories). The device may be operated with a maximum pressure of 6 bar.
  4. Set the operating pressure to 4 bar with the pressure regulator.
  5. Connect the mains plug to a socket outlet with earthing contact.
  6. Switch on the device.
  7. Wait approximately 10 minutes to warm up.
- The device is now ready for use.

## 4 Operation

### 4.1 Operating position

The device must be operated **only with the nozzle pointing downwards**. In other positions melt may get into the compressed-air ducts and damage the device.

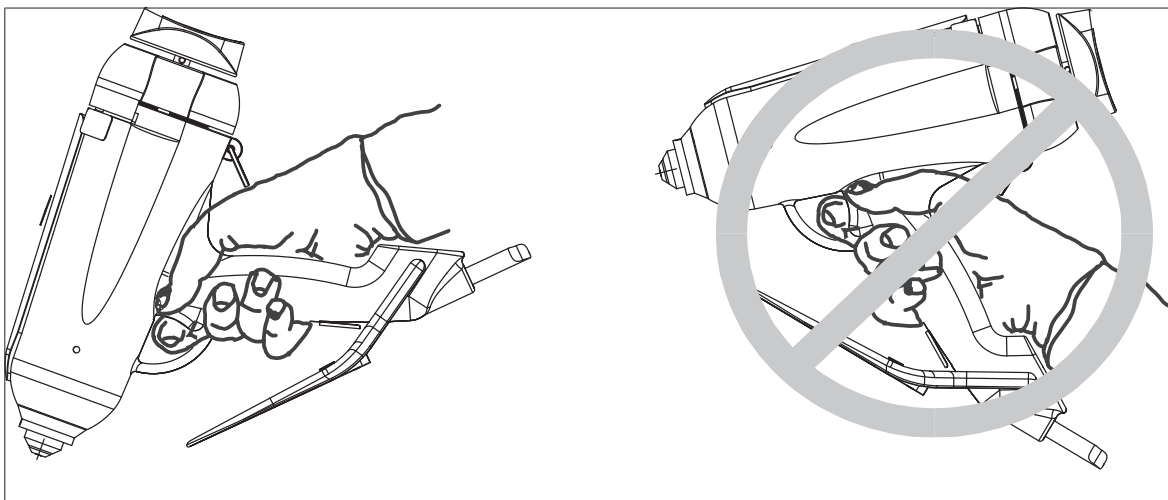


Fig. 4/1: Permitted operating position

### 4.2 Charging

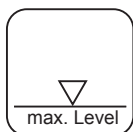


#### Burn hazard!

Nozzle and molten adhesive can be over 200 °C hot. Always wear heat-resistant gloves when performing the steps described below.

The adhesive can be refilled as soon as the fill level has dropped below the reserve in the tank or below the marking on the outside of the housing.

1. Place the device in the working bracket or on the base.
2. Switch the device on. Wait approx 10 min. until the working temperature has been reached.
3. Take hold of the device by the handle (7) with one hand. With the other hand turn the lever (2) clockwise through 180° and swivel the closure cap open.
4. Fill the tank to a level not less than 2 cm below the rim. The maximum level is marked on the device with a sticker (see illustration left). Do not charge the device above this level since the melt expands when heated.
5. Swivel the closure cap back. Turn the lever (2) anticlockwise as far as it will go, in order to lock the cap.



### 4.3 Discharging and metering melt

1. Place the device in the working bracket or on the base.
2. Switch the device on. Wait until working temperature has been reached.
3. Check that there is enough melt in the tank.



#### Burn hazard!

If the device is “run dry” drops of melt may escape uncontrolled and endanger the operator and persons in the vicinity.

Every time you actuate the trigger, therefore, first carry out step 4.3 above.

4. Actuate the trigger (6)  
You can meter the quantity discharged by altering the pressure (max. 6 bar) at the pressure regulator and/or selecting an appropriate nozzle.

5. After the trigger (6) has been released the compressed-air supply is cut off immediately and the tank vented.

#### **4.4 Adjusting the spray pattern (Tec 4500S only)**

The spray pattern is altered by adjusting the spray air.

Set the optimum spray pattern by turning the spray-air choke (5) (access via the hole in the left housing half):

- Turning it clockwise decreases the spray-air pressure.
- Turning it anticlockwise increases the spray-air pressure.

#### **4.5 Switching off**

1. Press the Start/Stop button (1).
2. Adjust the operating pressure down to "0" with the pressure regulator or disconnect the compressed-air supply.



## 5

**What if...**

This Section summarises the status and error messages and provides help in eliminating errors.

If malfunctions occur please first check:

- that the power supply and compressed-air supply are functioning correctly, and
- whether there is mechanical damage to the device or supply lines (power supply, compressed air).

If you find any mechanical damage, the device must in no circumstances be started up again. Have it checked and repaired by a qualified service agent.

## 5.1

**Troubleshooting**

Fault	Possible cause	Remedy	See Section
Nozzle goes on dripping	Nozzle valve partially obstructed or damaged	Drain the device. Actuate the trigger for approx. 5 s to clear the nozzle. <b>Tec 4500B:</b> Clean or replace nozzle end <b>Tec 4500S:</b> Clean or replace swirl nozzle, pressure spring and ball	6.2
Too little or no melt is discharged	Operating pressure too low	Increase operating pressure (max. 6 bar)	4.3
	Compressed-air supply disconnected	Check compressed-air supply	
	Nozzle system clogged	<b>Tec 4500B:</b> Clean or replace cone nozzle and if necessary nozzle end <b>Tec 4500S:</b> Clean or replace swirl nozzle, pressure spring and ball	6.2, 6.3
Compressed air escapes from closure cap (3)	Insufficient cover pressure	Increase cover pressure	6.4
	Gasket dirty	Clean sealing faces	
Compressed air escapes from service unit	Connections not airtight	Tighten or replace gaskets	
<b>Tec 4500S only</b>			
Spray pattern not ideal	Spray pattern wrongly set	Adjust spray air	4.4
	Nozzle system clogged or damaged	Clean or replace swirl nozzle, pressure spring and ball	6.3.3

### 6 Servicing/maintenance

**Danger!**

Danger due to inadvertent triggering.

Disconnect the compressed air supply before all maintenance and service work.

**Danger!**

Voltage hazard.

All operations which necessitate opening the device must be performed only by qualified electricians.

**Burn hazard!**

Nozzle and molten adhesive can be over 200 °C hot. Wear heat-resistant gloves when performing servicing and maintenance operations.

#### 6.1 Service intervals

Observe the stated service intervals to ensure always correct and reliable operation:

Weekly:	Check that all parts are present, leak-free and undamaged and all screws and lines securely seated
	Remove adhesive residues and other contaminants, especially on the inside of the cover

#### 6.2 Cleaning

- Do not use aggressive cleaning agents for cleaning the device. These may damage device components.  
We recommend cleaning with paraffin oil.
- Replace completely parts which are no longer cleanable (e.g. because of burnt-on or reacted hot-melt adhesive). We recommend having this work done by the manufacturer or distributor.
- Remove residues of hot-melt adhesive and other contaminants by mechanical means only, e.g. with a cloth, soft brush, wooden spatula or similar.

##### 6.2.1 Cleaning the nozzle

- Wipe the nozzle with a cloth to remove slight external dirt.
- To remove blockages insert a drill bit, needle or wire of suitable diameter into the nozzle orifice.

In stubborn cases replace the nozzle (see Section 6.3).

### 6.3 Nozzle systems

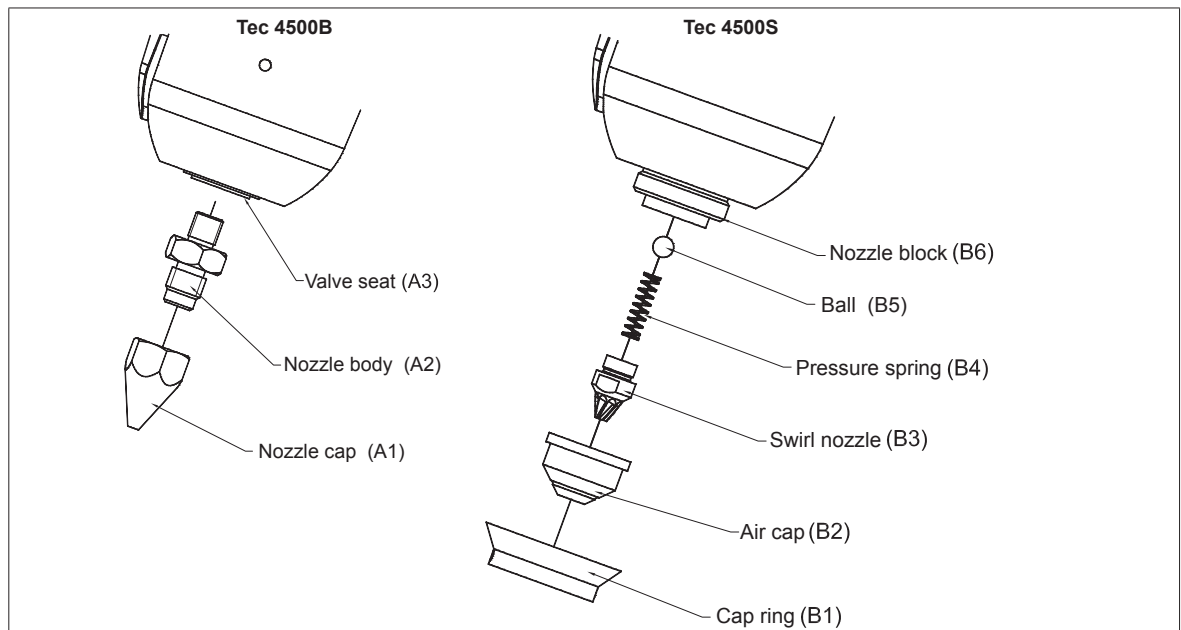


Fig. 6/1: Nozzle systems in detail

#### 6.3.1 Replacing the nozzle cap (Tec 4500B)

**Tools needed** • 2 open-end spanners size 19

1. Disconnect the compressed air supply.
2. Let the device heat up thoroughly.
3. Secure the nozzle body (A2) and unscrew the nozzle cap (A1).
4. Screw on the new nozzle cap (A1) by hand first and allow to heat up for 2 minutes.
5. Re-secure the nozzle body (A2). Tighten the new nozzle cap (A1) without using force.

#### 6.3.2 Replacing the nozzle body (Tec 4500B)

**Tools needed** • 2 open-end spanners size 19

There must be no melt at all in the tank when the nozzle end is replaced.

Therefore discharge the melt completely, e.g. into a collecting vessel.

1. First, proceed as described in chapter 6.3.1 up to Point 3 (dismantling the nozzle).
2. Unscrew the nozzle body (A2).
3. Screw on the new nozzle body handtight. Now tighten lightly (without using force) with the open-end spanner.
4. Assemble the nozzle cap (A1).

### 6.3.3 Replacing the swirl nozzle, pressure spring & ball (Tec 4500S)

#### Tools needed

- 1 hook spanner
- 1 open-end spanner size 11

There must be no melt at all left in the tank when the nozzle end is replaced. Therefore discharge the melt completely, e.g. into a collecting vessel.

1. Disconnect the compressed-air supply.
2. Release the cap ring (B1) by turning it **when warm** without using force.
3. Remove the air cap (B2).
4. Loosen the swirl nozzle (B3) with the open-end spanner size 11.
5. Remove the pressure spring (B4) behind the swirl nozzle and the ball (B5).
6. Fit the new components in reverse order.

### 6.4 Adjusting the cover pressure

#### Tools needed

- 1 hexagon socket spanner size 1.5
- 1 hexagon socket spanner size 2.5
- 1 hexagon socket spanner size 3

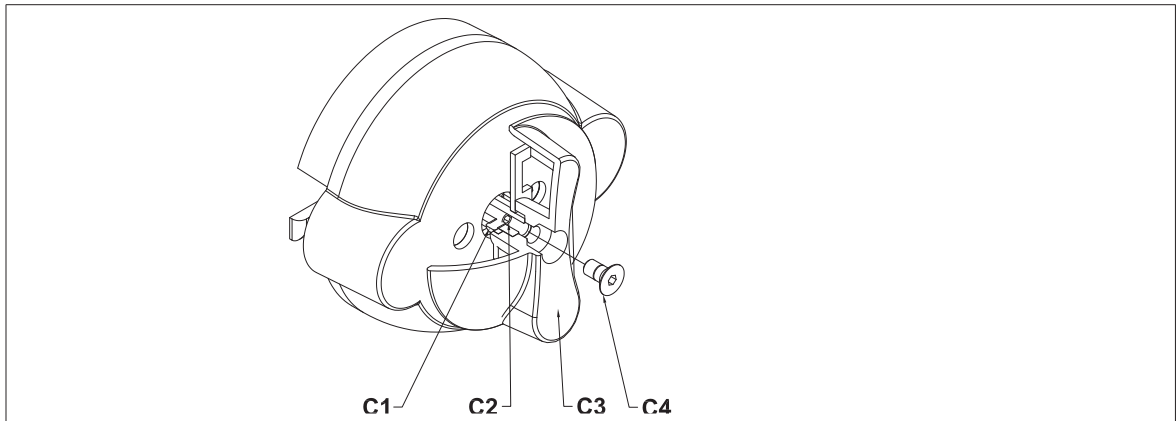


Fig. 6/2: Adjusting the cover pressure

1. Rotate the lever (C3) clockwise and swivel the cover until fully open.
2. Loosen the lever fixing screw (C4) with the hexagon socket spanner size 3. Withdraw the screw.
3. Loosen the clamping screw (C1) with the hexagon socket spanner size 1.5 (approx. 1.5 turns).
4. Insert the hexagon socket spanner size 2.5 into the adjusting screw through the lever screw-hole. Turn the adjusting screw clockwise initially by approx. 90°.
5. Close and lock the cover.  
If the cover will not close, keep turning the adjusting screw back (clockwise) by approx. 15° until the cover closes easily.
6. Actuate the trigger.
  - If the cover now closes correctly, proceed at step 7.
  - If the cover still does not close correctly, repeat the adjustment from section 4.
7. Open the cover again.
8. Tighten the clamping screw (C1).
9. Fit the lever fixing screw (C4).

## 6.5 Replacing the cover gasket

### Tools needed

- 1 Phillips-type screwdriver size 1

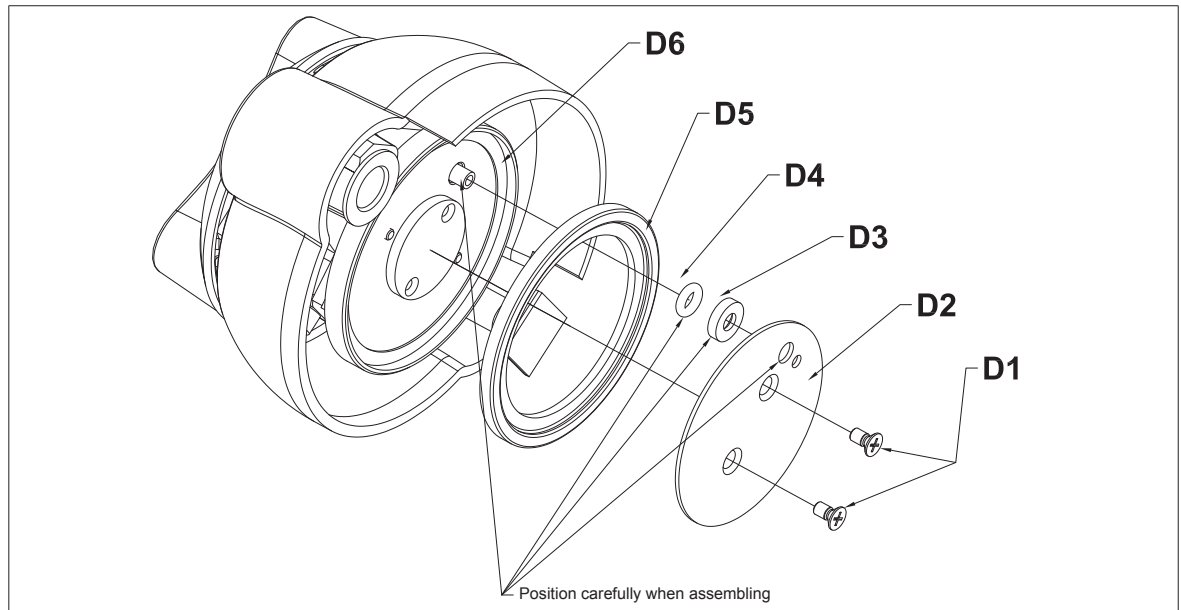


Fig. 6/3: Replacing the cover gasket

There must be no melt at all left in the tank when the cover gasket is replaced. Therefore discharge the melt completely, e.g. into a collecting vessel.

1. Let the device heat up.  
Continue activating the trigger until the tank is completely empty.
2. Disconnect the compressed air supply.
3. Disassemble the entire closure unit (see Chapter 6.7).
4. Release the fastening screws (D1) of the sealing plate (D2) with the Phillips screwdriver. Carefully remove the sealing plate.
5. Carefully remove the gasket (D5) from the pressure plate (D6).
6. Set the new gasket in the pressure plate in such a way that it fits evenly all over.
7. Mount the sealing plate. Observe the position of the washer (D3) and the O-ring (D4) of the ventilation opening. Tighten the fastening screws (D1) alternately.

### 6.6 Replacing the valve assembly

#### Tools needed

- 1 hexagon socket spanner size 2.5
- 1 hexagon socket spanner size 3
- 1 auxiliary screw M4

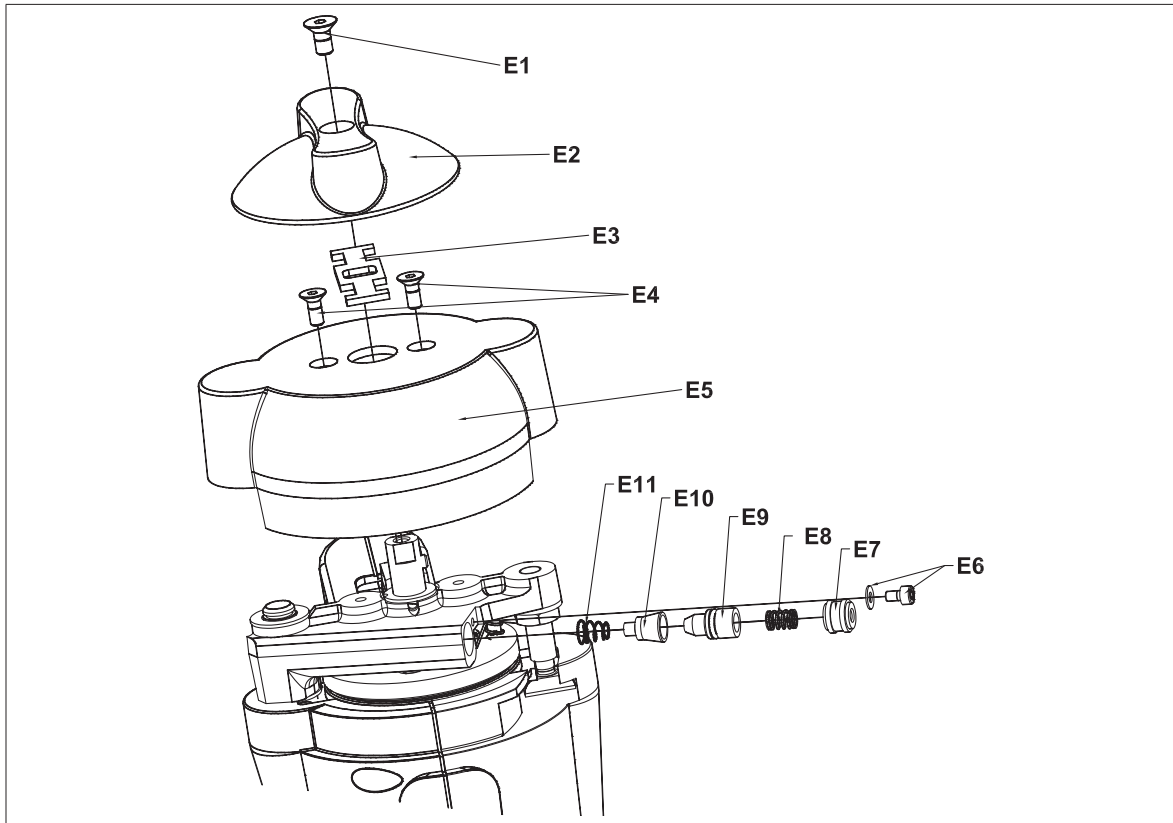


Fig. 6/4: Replacing the valve assembly

1. Let the device heat up. Continue activating the trigger until the tank is completely empty.
2. With the cover closed undo the fixing screw (E1) of the lever (E2) with the hexagon socket spanner size 3. Remove the lever and carrier (E3).
3. Undo the screws (E4) with the hexagon socket spanner size 2.5. Remove the cover casing (E5).
4. Screw the auxiliary screw M4 in to the clamping piece (E7). Release the clamping screw (E6) with washer with the hexagon socket spanner size 2.5. Carefully remove the clamping piece with auxiliary screw M4 from the valve housing. Also remove the spring (E8) and the cone (E9).
5. Decrease the pressure to 1....2 bar. Briefly actuate the trigger. The burst of pressure ejects the valve (E9) and spring (E10) from the valve housing. Hold a cloth in front of the opening to catch these (hot!) parts.
6. Fit the new components, cover casing and lever in reverse order.

## 6.7 Replacing the (complete) cover

### Tools needed

- 1 hexagon socket spanner size 2.5
- 1 hexagon socket spanner size 3
- 1 open-end spanner size 13

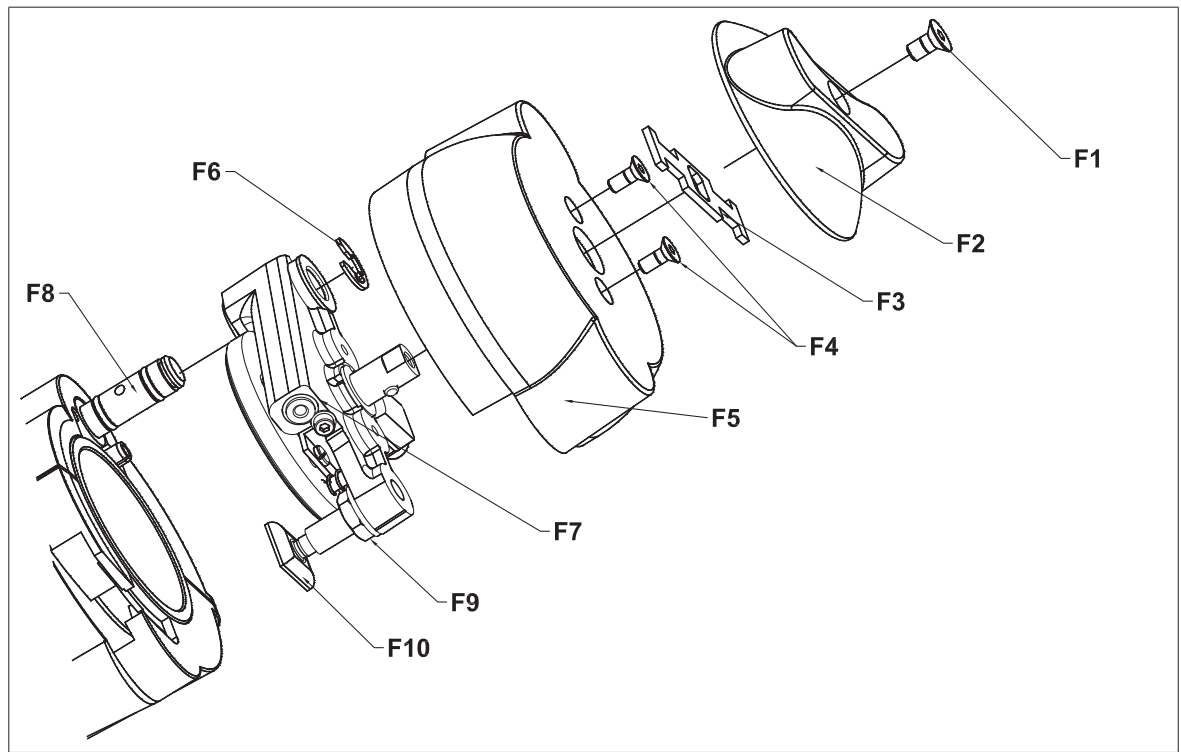


Fig. 6/5: Replacing the cover

1. Let the device heat up. Continue activating the trigger until the tank is completely empty.
2. With the cover open undo the fixing screw (F1) of the lever (F2) with the hexagon socket spanner size 3. Remove the lever and carrier (F3).
3. Undo the screws (F4) with the hexagon socket spanner size 2.5. Remove the cover casing (F5).
4. Release and remove the Seeger circlip ring (F6).
5. Pull the entire closure unit (F7) off from the axle (F8). Carefully set the new closure unit on the axle.
6. Mount the Seeger circlip ring (F6).
7. Release the counter nut (F9) with the open-end spanner size 13.
8. Adjust the tie bolt by twisting it so that its foot slides cleanly into the recess in the housing when the lid closes. Then retighten the counter nuts. Check again to see if the cover closes cleanly. If necessary, readjust the tie bolt.
9. Mount the cover casing and the lever.

## Repairs

### 7 Repairs

Repairs other than those described in this Operating Manual may be undertaken only by persons appointed by the manufacturer or other technically competent persons using original replacement parts.

### 8 Warranty

The device has been developed and manufactured in accordance with the most up-to-date technical knowledge. We provide the initial purchaser with a warranty according to statutory requirements for function, materials and processing. Normal wear and tear is excepted.

The warranty ends if improper treatment, use of force, repairs by third parties or the fitting of non-original replacement parts is evident.

The warranty covers repair or replacement at our discretion. A warranty extending beyond the kit supplied by us is precluded, since proper and expert use of the device is outside our control.

Please note our terms of business!

### 9 Disposal



Pass the device, packing and fittings for environmentally correct recycling/reuse (in accordance with European Parliament and Council Directive 2002/96/EC of 27th January 2003).

## Accessories

### 10 Accessories

Designation	Article No.
Metal Stand	PA3096-SPARES
Pressure regulator	PA6039

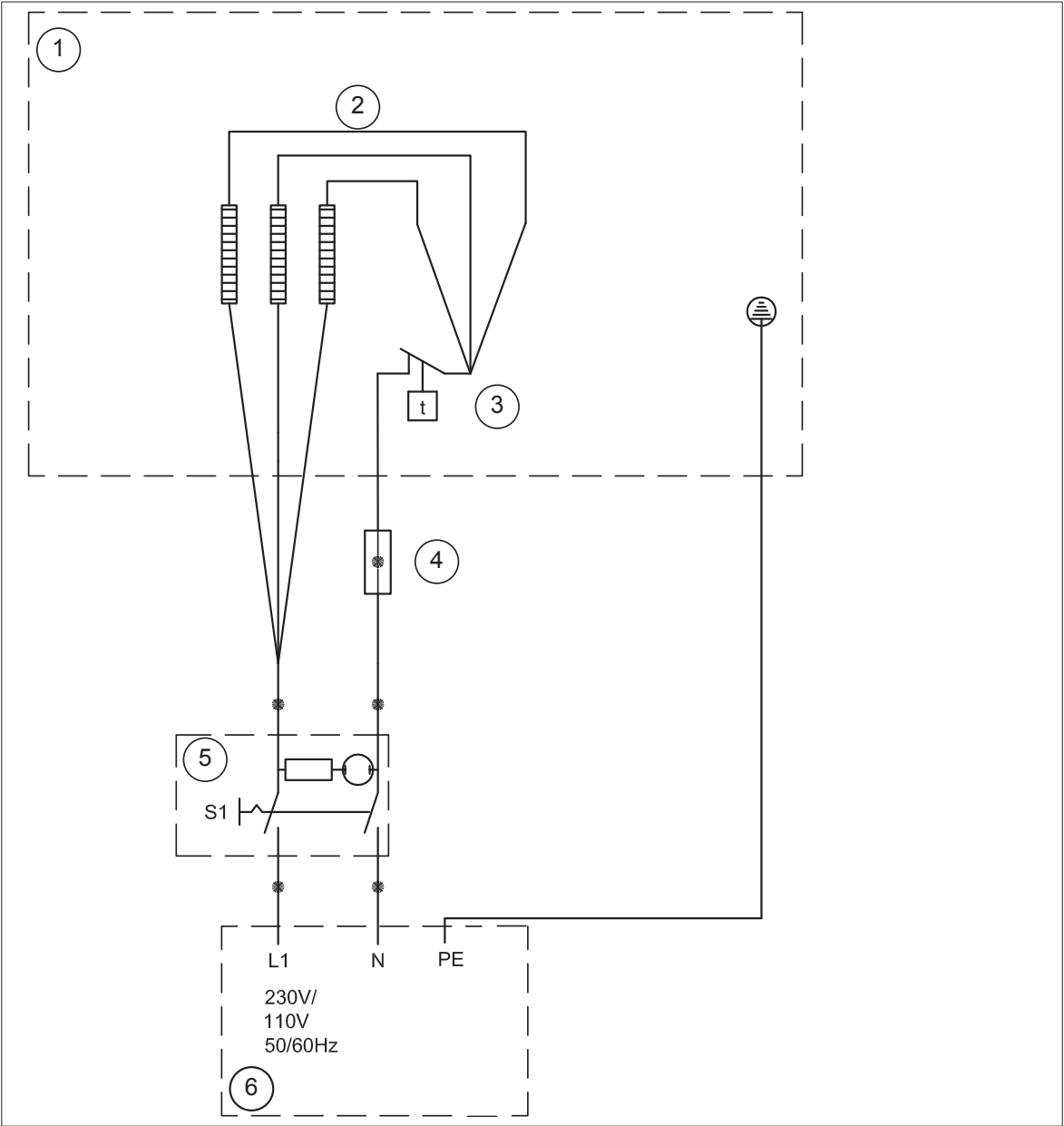


11

Diagrams

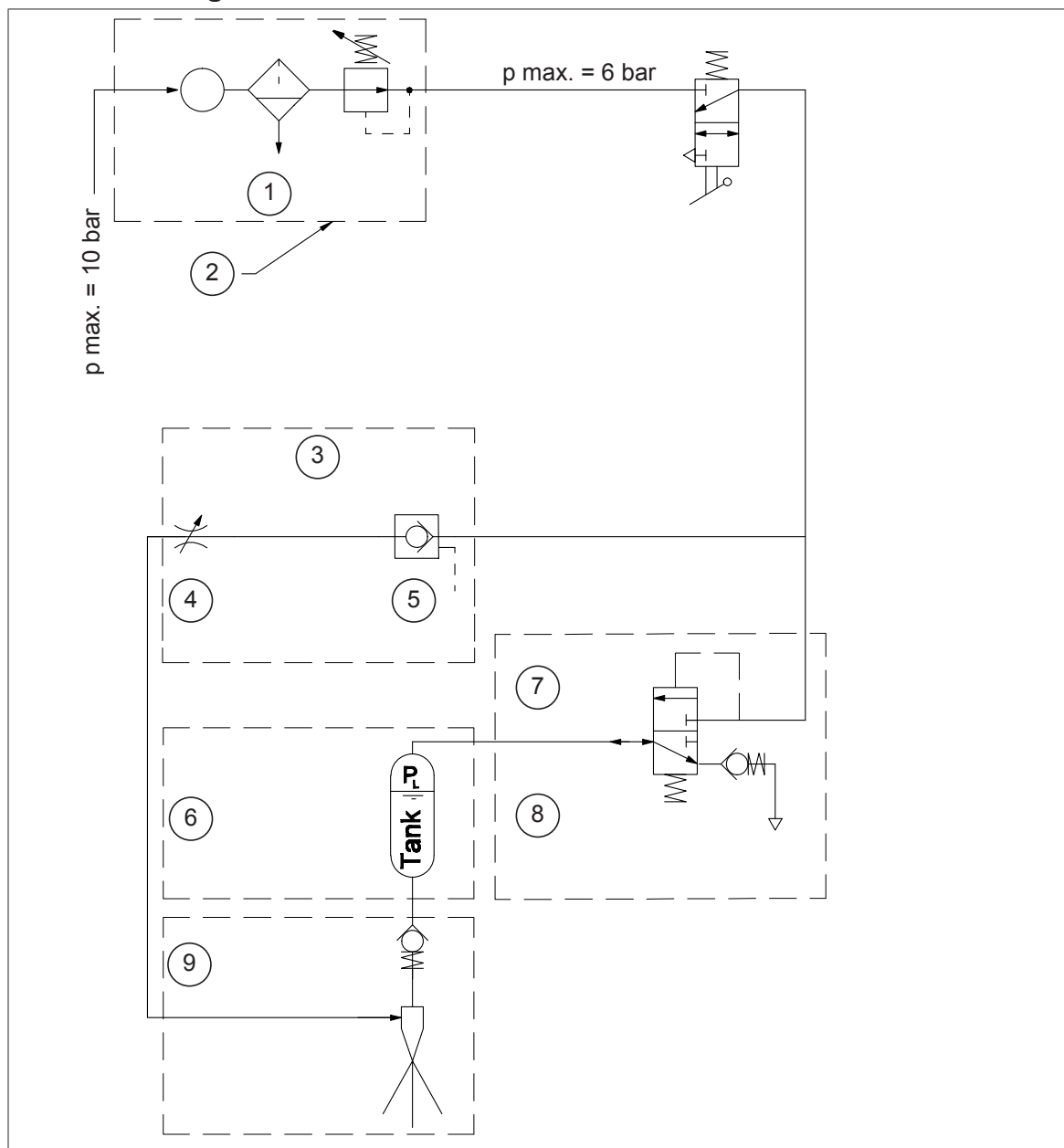
11.1

Wiring diagram



1	Melt tank
2	Heater
3	Thermostat
4	Safety fuse
5	Switch
6	Power cord

## 11.2 Pneumatic diagram



1	Pressure reducer
2	Option
3	Only for spray version
4	Air regulator
5	Nonreturn valve
6	Melt tank
7	Cover
8	Exhaust
9	Nozzle



## Conformity Declaration

We

**Power Adhesives Ltd  
Basildon, SS13 1TN England**

declare on our sole responsibility that the product

**Hot melt adhesive applicator  
Tec 4500B & Tec 4500S**

to which this declaration refers, complies with the following Standards or normative documents in its supplied condition:

**EN55014**

**EN 60204-1**

**EN60335-1**

in accordance with the stipulations of guideline

**2001/95/EC**

**2002/95/EC**

**2002/96/EC**

**2004/108/EC**

**2006/95/EC**

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Steve Sweeney  
Technical Director

