



867

Puller Feed Drive

[Additional Instructions](#)

**IMPORTANT**  
**READ CAREFULLY BEFORE USE**  
**KEEP FOR FUTURE REFERENCE**

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## 1 About this additional manual

This additional manual describes the puller feed drive with DAC control. For the standard functions, see the  *DAC Control Operating Manual*.

Kits:

0867 591134

0867 591144

## 2 Machine overview

Fig. 1: Machine overview



(1) - Control panel

(2) - Top puller pressure regulator

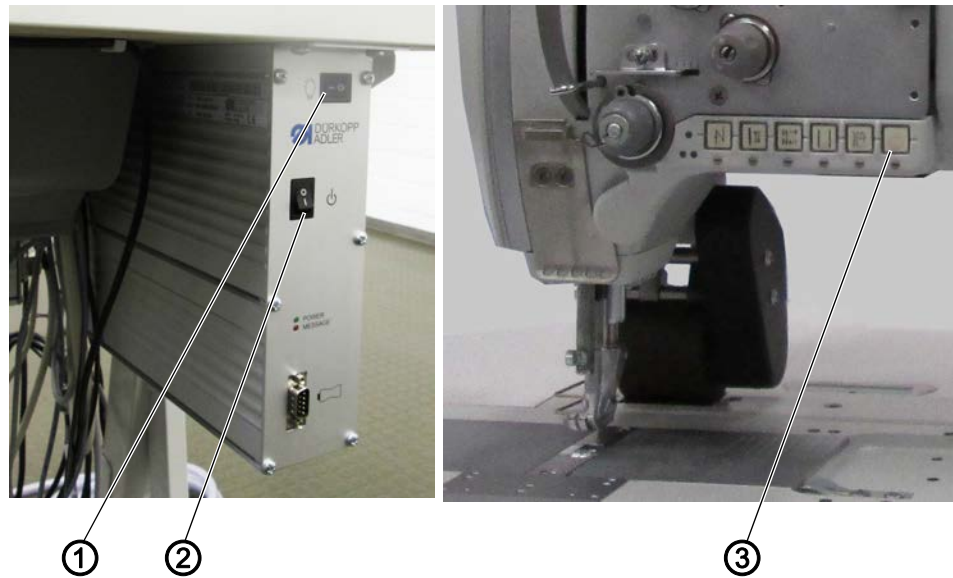
(3) - Puller feed drive button

(4) - Top puller

### 3 Operation

#### 3.1 Activating the puller feed drive

Fig. 2: Activating the puller feed drive



(1) - Puller feed drive switch  
(2) - Main switch

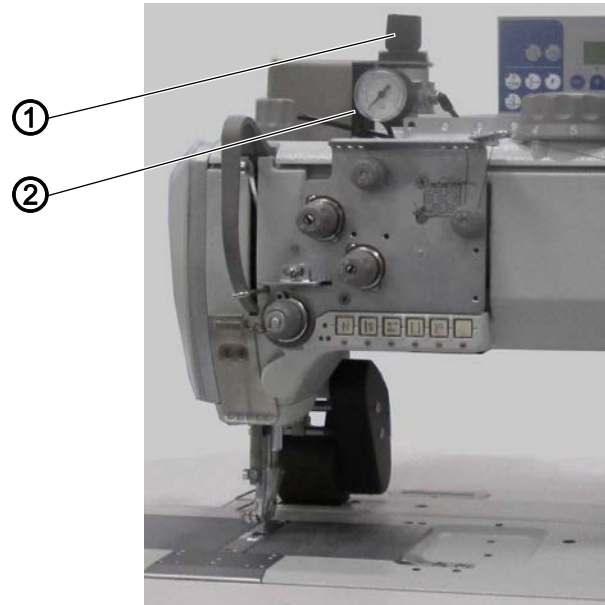
(3) - Puller feed drive button

1. Activate the puller feed drive (1) switch on the control unit. Leave the switch activated permanently.
  2. Switch on the machine at the main switch (2).
  3. Press the puller feed drive (3) button on the machine's arm.
- ↪ The button lights up, the puller feed drive is activated.

### 3.2 Setting the top puller pressure

The pressure of the top puller can be set when the puller feed drive is activated.

Fig. 3: Setting the top puller pressure



(1) - Adjustment knob

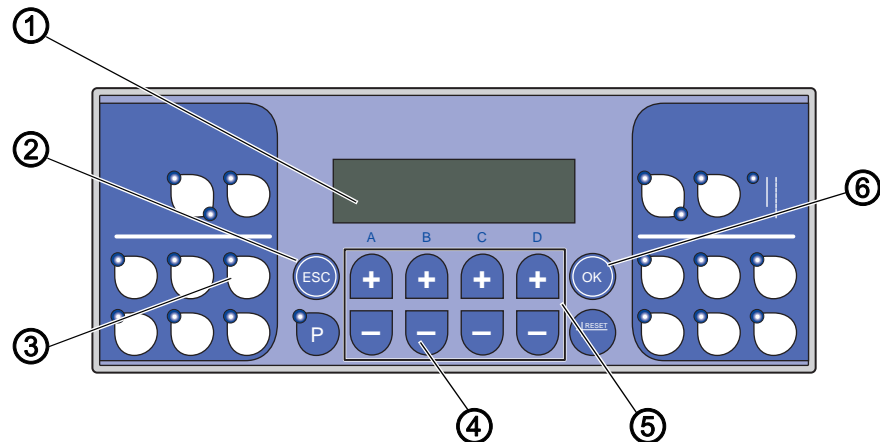
(2) - Pressure gauge

1. Activate the puller feed drive.
2. Pull the adjustment knob (1) up.
3. Turn the adjustment knob and set the pressure (0 - 6 bar):
  - **clockwise**: to increase pressure
  - **counterclockwise**: to reduce pressure
4. Push the adjustment knob (1) down.



## 4 Settings

Fig. 4: Settings



- (1) - Gauge A (Stitch length)  
 (2) - ESC key  
 (3) - F-key

- (4) - Plus-/minus buttons for bottom puller (B)  
 (5) - Plus-/minus buttons for top puller (D)  
 (6) - OK button

### 4.1 Setting the feed distance

The feed distance can be set between a length of 1 – 15 mm per stitch in increments of 1/10.



1. To change the feed distance of the top puller, press the **Plus/Minus (D)** buttons.
2. To change the feed distance of the bottom puller, press the **Plus/Minus (B)** buttons.

### 4.2 Setting the puller feed type

Two types of feed are available: Constant or intermittent feed. With intermittent feed, the speed is restricted and depends on the feed distance set.




1. Open the parameter  $t\ 14\ 11$ .
2. Set the feed height:
  - 0: constant
  - 1: intermittent



#### Information

To change quickly between the feed types, the puller feed type can be programmed to the freely programmable F-key on the control panel (parameter  $t\ 52\ 20 = 23$ ).

See also  *DAC Control operating manual*.

### 4.3 Setting the puller feed operating mode

You can set when the puller should lift up automatically.



1. Open the parameter *t 14 00*.
2. Set the operating mode:
  - 0: Puller is not lifted up
  - 1: Puller is lifted up with sewing foot aeration
  - 2: Puller is lifted with bar
  - 3: Puller is lifted with sewing foot aeration and bar

### 4.4 Setting the puller delay

You can set the number of stitches until the puller is lowered.



1. Open the parameter *t 14 03*.
  2. Set the number of stitches (0-255).
- ↪ The puller feed button lights up, the puller feed drive is activated.

### 4.5 Setting the angle of feed

You can set the angle at which the puller is to feed.

0° is the reference position here.

The default settings are:

- 10° for the initial feed angle
- 170° for the final feed angle



1. Open the parameter *t 14 12*.
2. Set the initial feed angle (0-359°).
3. Open the parameter *t 14 13*.
4. Set the final feed angle (0-359°).

### 4.6 Setting the material compensation values

Slip properties of various materials can be compensated for.



1. Set a stitch length of 5 mm.
2. Open the parameter *t 14 21*.
3. Set the material compensation value for the top feed puller (0-255).
4. Open the parameter *t 14 31*.
5. Set the material compensation value for the bottom feed puller (0-255).

## 5 Service

### 5.1 Initializing the puller feed drive

The puller feed drive has been preset in the factory. It may however be necessary to reinitialize the puller feed drive e. g. in case of a software update.



1. Open the parameter  $t\ 51\ 25$ .
2. Select function module  $C = 10$ .
3. Confirm with OK.
- ↳ The parameter  $t\ 11\ 60$  opens up.
4. Select function 5.
5. Open the parameter  $t\ 51\ 53$ .
6. Select function module 23.
7. Open the parameter  $t\ 14\ 10$ .
8. Set the number of pullers = 2.
- ↳ The puller feed has been initialized.

### 5.2 Setting other parameters

#### 5.2.1 Setting the transmission ratios

The transmission ratios of the stepper motors can be set to the relevant drive shafts. A transmission ratio of 1000 i.e. a 1:1 ratio has been preset in the factory.



1. Open the parameter  $t\ 14\ 20$ .
2. Set the puller feed upper transmission ratio (1-9999).
3. Open the parameter  $t\ 14\ 30$ .
4. Set the puller feed lower transmission ratio (1-9999).

#### 5.2.2 Setting the puller feed pressure



1. Open the parameter  $t\ 14\ 14$ .
2. Set the feed pressure:
  - 0: In case rapid stroke adjustment, the puller remains lowered with hydraulic pressure
  - 1: In case of rapid stroke adjustment, the puller is relieved of pneumatic pressure. The pressure of the springs only acts on the material
  - 2: Permanently depressurized

### 5.2.3 Setting puller feed operation



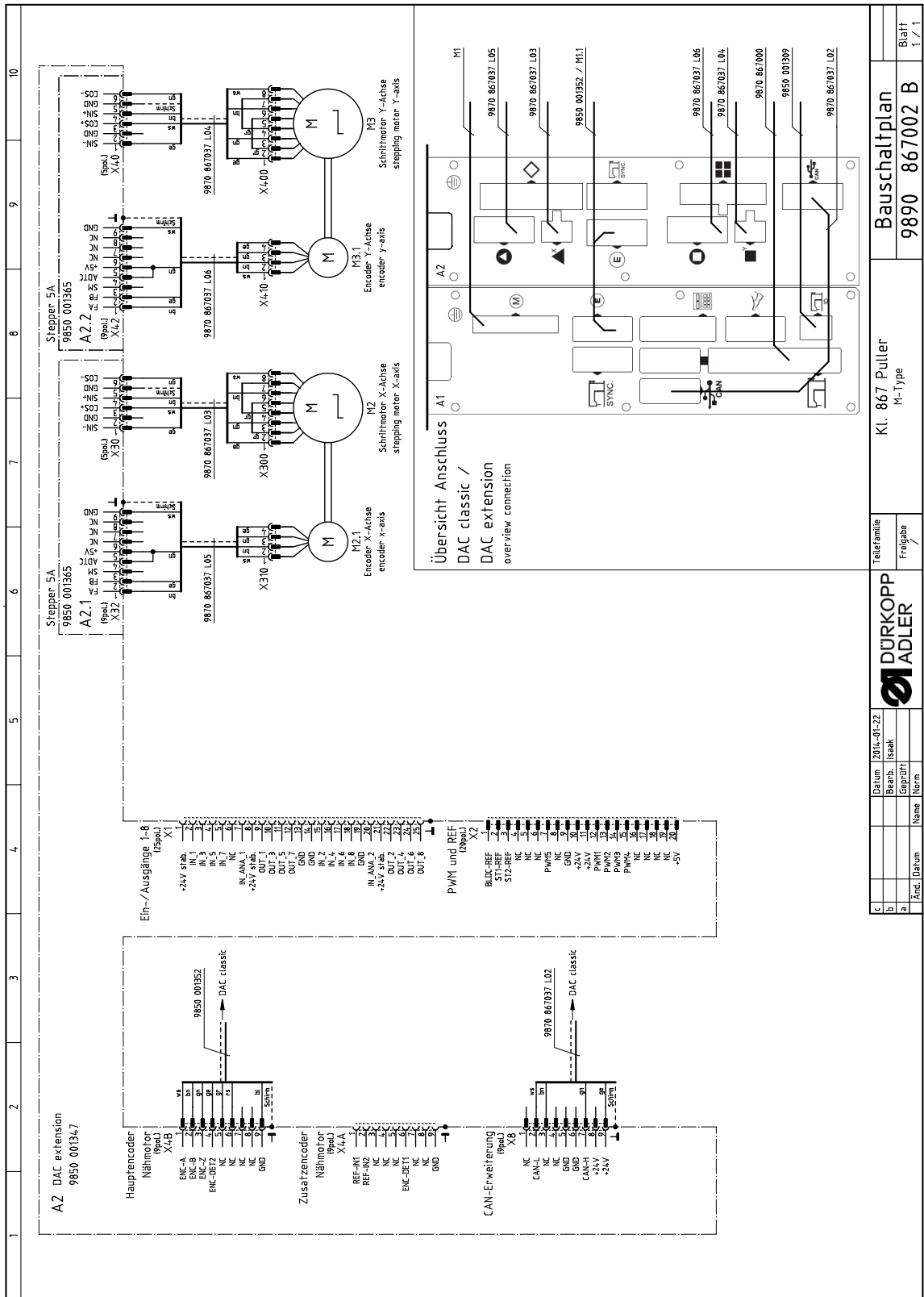
1. Open the parameter  $t\ 14\ 10$ .
2. Set the puller feed operation
  - 0: No puller feed
  - 1: Puller feed with one puller only from above
  - 2: Puller feed with one puller each, from above and below

### 5.3 Malfunctions

| Description                                      | Possible cause                                                                                                                         | Remedy                                                                                              |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Both feed pullers feeding in the wrong direction | The wires of the stepper motors have got mixed up.                                                                                     | <ul style="list-style-type: none"> <li>• Swap over the wire connections.</li> </ul>                 |
| Stepper motors not moving                        | <ul style="list-style-type: none"> <li>• Wires connected incorrectly</li> <li>• Puller feed drive not correctly initialized</li> </ul> | <ul style="list-style-type: none"> <li>• Check the wires.</li> <li>• Check the settings.</li> </ul> |

## 6 Appendix

Fig. 5: Control wire – puller feed stepper motor



|               |  |                             |  |
|---------------|--|-----------------------------|--|
| Datum         |  | 2016-07-22                  |  |
| Revisi        |  | 1                           |  |
| Gezeichnet    |  | [Signature]                 |  |
| Name          |  | Norm                        |  |
| Änd.          |  | Datum                       |  |
| Tellerfamilie |  | Ki. 867 Puller M-Type       |  |
| Freigabe      |  | Bauschaltplan 9890 867002 B |  |
| Blatt         |  | 1 / 1                       |  |

Fig. 6: Valve strip – distributor wire 867

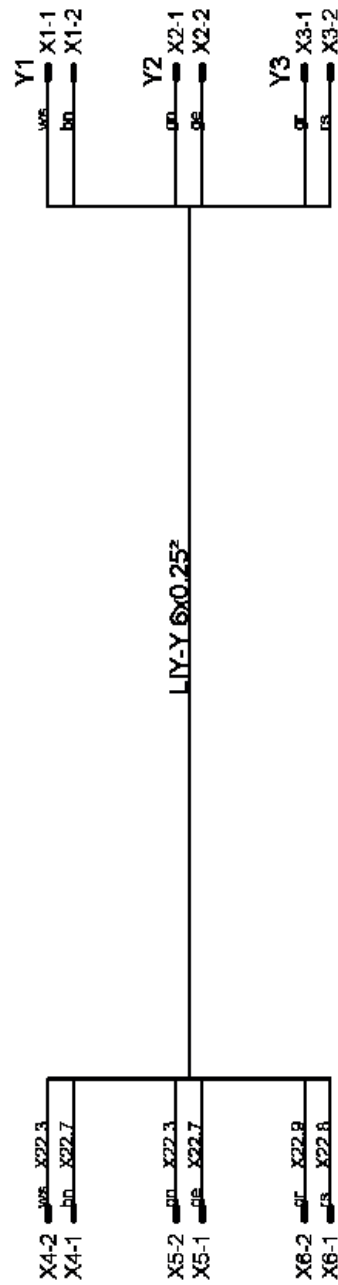


Fig. 7: Pneumatics diagram

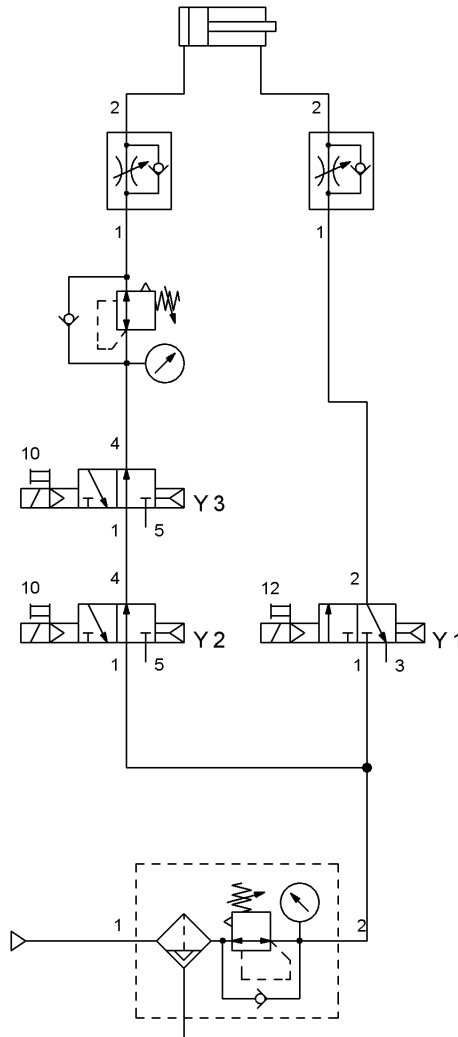


Fig. 8: Valve block



(1) - Y1.1 and Y2.1  
 (2) - Y1.2

(3) - Y2.4  
 (4) - Y3.4









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