Setting Instructions for SpinBox
SE 8 / 9 / 10, SQ 8 / 9

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1. Safety instructions

The following safety instructions concern the SpinBox and the modernized units of the spinning machine.

For the units of the machine not concerned by the modernization, the safety instructions of the machine manufacturer are fully applicable.

1.1 Safety equipment

Main Switch

The main switch (Fig. 1) can be padlocked in the "O" position to prevent unauthorized or accidental starting-up of the machine.

When the main switch is in the "O" position, the power supply to all drives is interrupted.

Emergency Stop Function of the Main Switch

Turning the yellow-red main switch to the "O" position during operation results in immediate interruption of the power supply.

To avoid damage to the machine, the emergency stop function should only be used in the case of emergency.

To stop the machine during normal operation for setting, proceed as follows:

- Stop the machine.
- Turn the lever of the main switch until the arrow points to "O".
- Continue to turn the lever in the direction of the arrow until the cover can be pushed back from the opening.
- Insert the padlock and lock it.
- Remove the key.
- Attach the warning sign (Fig. 2) to the main switch.
2. **SE 8 / SQ 8**

2.1 Setting tools SE 8 / SQ 8

Centring of rotor housing seal and axial rotor position

- **951.5217**
  Scanning caliber complete
  SE 7 / 8 / 9 / 10 / 11 / 12

- **289.0496**
  Dial gauge

- **954.2004**
  Scanning caliber
  SE 7 / 8 / 9 / 10 / 11 / 12

- **957.8242**
  Scanning caliber complete
  SC / SQ

- **289.0496**
  Dial gauge

- **957.8241**
  Scanning caliber
  SC / SQ

- **954.0589**
  Setting gauge
  SE 7 / 8

- **959.1420**
  Setting gauge
  SQ 7 / 8

- **954.0590**
  Setting sleeve
  SE 7 / 8 / SQ 7 / 8

**Centring of channel plate**

- **954.1133**
  Centring gudgeon
  SE 7 / 8 / SQ 7 / 8

- **954.1134**
  Centring cone
  SE 7 / 8 / 9

- **957.5227**
  Centring cone
  SE 10 / SQ

- **957.6469**
  Setting gauge for opening unit
  SE 7 / 8 / 9 / 10 / SC / SQ
2.2  Centring of rotor housing seal

Required tools:
- Setting gauge SE 7/8 (A, 954.0589)
- Setting gauge SQ 7/8 (B, 954.1420)
- Setting sleeve SE 7/8 SQ 7/8 (C, 954.0590)

Prerequisites:
- Stop the machine.
- Turn the lever of the main switch until the arrow points to "O".
- Continue to turn the lever in the direction of the arrow until the cover can be pushed back from the opening.
- Insert the padlock and lock it.
- Remove the key.
- Attach the warning sign to the main switch.

Centring of rotor housing seal

Check before the setting if the rotor housing has locked into place properly.

- Open the cover.
- Remove the rotor and enter the setting gauge instead of the rotor (Fig. 3)
- The rotor brake keeps the shaft of the gauge concentric between the supporting discs.
- Loosen the screws of the rotor seal (1).
• Push the setting sleeve with its slightly conical end onto the gauge in the sealing bush to centre the gauge. (Fig. 4)
• Tighten the screws (2).
• Remove the setting sleeve, turn it upside down and push it again onto the gauge with the other (testing) opening. (Fig. 5).

It must be possible to push the sleeve with its testing side up to the recess without stopping at the sealing bush. Otherwise, repeat the setting.
2.3 Setting of axial rotor position

The thrust bearing is set during assembly and, normally, need not be adjusted later on. Subsequent adjustment may, however, be necessary after repair. The nut of the adjusting screw is marked with a lacquer.

**Required tools:**

- Setting gauge SE 7/8 (A, 954.0589)
- Setting gauge SQ 7/8 (B, 954.1420)
- Dial gauge (C, 951.5217)

**Prerequisites:**

- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

**Setting the distance between adjusting screw and rotor tip**

- Open the SpinBox cover.
- Remove the rotor from the SpinBox.
- Remove the navel and, if necessary, the washer, from the channel insert.
- Loosen the counter nut (1, Fig. 6) and turn the adjusting screw (2) a few turns back (away from the rotor).
- Insert the setting gauge until it rests against the stop.
- Pull the setting gauge about 2 mm back.
- Close the SpinBox cover carefully (it must not snap) and press it lightly against the rotor chamber.
- Open the cover of the SpinBox.
- Place the dial gauge on the rotor chamber (Fig. 7)
- Set the initial point for measuring by turning the adjusting screw of the gauge until the first pointer is on an easily readable value.
- Remove the dial gauge.
- Turning it slightly, press the setting gauge against the stop.
- Place the dial gauge on the rotor chamber again.
- Turn the adjusting screw, until the difference between the first and the second measurement is 0.4 mm to 0.7 mm.
- **Tip:** Set the value at 0.5 mm, as this is easily readable on the dial gauge.
- Tighten the counter nut.
Checking the distance between adjusting screw and rotor tip

- Open the SpinBox cover.
- Remove the rotor from the SpinBox.
- Remove the navel and, if necessary, the washer, from the channel insert.
- Insert the setting gauge until it rests against the stop.
- Pull the setting gauge about 2 mm back.
- Close the SpinBox cover carefully (it must not snap) and press it lightly against the rotor chamber.
- Open the cover of the SpinBox.
- Place the dial gauge on the rotor chamber (Fig. 7).
- Set the initial point for measuring by turning the adjusting screw of the gauge until the first pointer is on an easily readable value.
- Remove the dial gauge.
- Turning it slightly, press the setting gauge against the stop.
- Place the dial gauge on the rotor chamber again.
- The rotor position is correct, if the difference between the first and the second measurement is 0.4 mm to 0.7 mm.

Closing the SpinBox
- Insert the navel and, if necessary, the washer.
- Insert the rotor
- Close the SpinBox.
2.4 Centring of channel plate

This setting is only required if the centring plate (1) has been unscrewed.

Required tools:
- Setting gauge for opening unit SE 7-10/SC/SQ (A, 957.6469)
- Centring gudgeon SE 7/8 SQ 7/8 (B, 954.1133)
- Centring cone SE 7/8/9 (C, 954.1134)
- Centring cone SE 10/SQ (D, 957.5227)

Prerequisites:
- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

Centring of channel plate

- Open the cover of the SpinBox, until it is in position for maintenance.
- Remove the opening unit.
- Install the setting gauge (A).
- Enter the centring gudgeon (B) instead of the rotor.
- Install the centring cone (C) instead of the navel.
- Loosen the fixing screws (2) of the centring plate.
- Close the cover cautiously.
- The centring cone (C) takes a concentric position to the centring gudgeon (A).
- Push the channel plate against the stop (3) of the setting gauge. (Make use of the borehole clearance [2]).
- Tighten the screws (2) (cover still being closed).
ATTENTION

Channel plate must be flush with the housing on the left side. (Fig. 9)
2.5 Setting the rotor brake

The rotor brake is set in the works and needs not be adjusted. However, adjustment may be necessary after repair.

Functioning of the brake is correct if the brake closes when the SpinBox is opened. The rotor must stop within a few seconds.

Required tools:

- Feeler gauge 0,5 mm

Prerequisites:

- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

Setting the rotor brake

Opening the SpinBox

- Lower the cover to position 2 and remove the opening roller and the opening-roller housing.

Setting the brake

The rotor brake is set while the SpinBox is closed.

- Close the SpinBox.
- Open the cover of the adjacent SpinBox and remove the rotor and the rotor chamber.
- Loosen the fastening screw (1, Fig. 10) and adjust the adjusting eccentric (2) with the feeler gauge. The space between brake block and rotor shaft must be 0.5 mm.
- Tighten the fastening screw (1).
CAUTION!

If the space between brake block and rotor shaft is too small, the brake may assume an intermediate position, i.e. the rotor is braked slightly while still being driven by the tangential belt. The braking heat produced may do damage to the tyre of the TwinDiscs.

Closing the SpinBox

- Fit the rotors, rotor chambers, opening rollers and opening-roller housings.

- Close the SpinBox.
3. **SE 9/10 / SQ 9**

3.1 **Setting tools SE 9/10 / SQ 9**

**Centring of axial rotor position**

- 951.5217 Scanning caliber complete SE 7 / 8 / 9 / 10 / 11 / 12
- 289.0496 Dial gauge
- 954.2004 Scanning caliber SE 7 / 8 / 9 / 10 / 11 / 12

**Centring of channel plate**

- 954.1406 Centring gudgeon SE 9 / 10 / SQ 9
- 954.1134 Centring cone SE 7 / 8 / 9
- 957.5227 Centring cone SE 10 / SQ
- 957.6469 Setting gauge for opening unit SE 7 / 8 / 9 / 10 / SC / SQ

**Setting of rotor brake**

- 954.1997 Setting gauge 8,0 SE 9 / SC / SQ 9
- 958.4661 Setting gauge 8,3 SE 10 / 11 / 12

- 956.5830 Mounting device TwinDisc thrust bearing unit SE 9 / 10 / SC / SQ

**Setting of brake linkage device**

- 954.7588 Adjusting device brake SE 9 / 10 / SC / SQ
- 955.2286 Wedge for brake spring SE 9 / 10 / SC / SQ 9
3.2 Setting the rotor brake

The rotor brake is set in the works and needs not be adjusted. However, adjustment may be necessary after repair.

Functioning of the brake is correct if the brake closes when the SpinBox is opened. The rotor must stop within a few seconds.

Required tools:

- Setting gauge 8.0 SE 9/SC/SQ 9 (A, 954.1997)
- Mounting device for TwinDisc thrust bearing unit (B, 956.5830)

Prerequisites:

- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

The rotor bearing unit must be removed to adjust the brake.

- Lower the Cover to position 2
- Remove the rotor from the SpinBox
- Remove the opening roller from the SpinBox
- Remove the opening roller housing

Removing the TwinDisc thrust-bearing unit from the SpinBox

Each TwinDisc thrust-bearing unit is part of a specific SpinBox and bears the number of this SpinBox. After removal, the thrust-bearing unit must be returned to the original SpinBox.

The TwinDisc thrust-bearing unit is fitted to the SpinBox frame by centring pins and connected to the rotor brake lever via the connecting ring (1, Fig. 11).

- Unlatch the rotor bearing unit from the connecting ring.
- Slide the fitting tool under the rotor bearing unit and support the bearing in this position.
- Loosen the two screws which hold the rotor bearing on both sides of the SpinBox frame.
- Lift the rotor bearing unit from the centring pins (Fig. 12) and remove it from the SpinBox in a slanting downward movement.
Setting the Brake Blocks

The following description applies only to new brake blocks:

- Hold the setting gauge (2, Fig. 13) so that the milled areas of the setting gauge are vertical.
- Insert the setting gauge (2) in the rotor bearing unit instead of the rotor.
- Turn the gauge by 90°.
- The brake blocks must fit closely to the gauge shaft.
- Loosen the locking nut at the threaded pin.
- Turn the threaded pin (3) of the tilting lever (4), until the brake blocks are in contact with the setting gauge.
- Tighten the locking nut at the threaded pin. Make sure that the setting is not changed during tightening.

The rotor diameter being 1 mm smaller than the diameter of the setting gauge, there is a 0.5 mm wide gap on both sides of the rotor shaft.

Fitting the TwinDisc thrust-bearing unit

- To fit the rotor bearing unit, reverse the sequence given for removal (Fig. 12).
- Make sure that the number of the thrust-bearing unit corresponds to the number of the SpinBox.
- Use the fitting tool.
- When fitting the thrust-bearing unit, pay attention to the following:
  - It must sit correctly on the centring pins.
  - The rotor brake lever must be engaged in the connecting ring.
  - First tighten the screw on the right.

Fitting the rotor chamber

- Lift the retainer spring of the rotor chamber slightly and fit the rotor chamber.
- Fit the opening-roller housing and then the opening roller.
- Insert the rotor.
- Close the SpinBox.
3.3 Setting the brake linkage device

Required tools:
– Wedge for brake spring (A, 955.2286)
– Adjusting device brake (B, 954.7588)
– Feeler gauge 0.6 mm thick

Prerequisites:
– The machine is stopped.
– The main switch is in the "O" position, padlocked and the warning sign is attached to it.
– The belly pan is released.

Prerequisites for setting
1. The brake blocks are correctly adjusted.
2. The tangential belt is mounted in the machine and correctly tensioned.
3. Rotor and rotor chamber are in the SpinBox.

Inserting the wedge in the rotor chamber
• Open the SpinBox.
• Slide the wedge (1) between the brake spring and the rotor chamber recess (Fig. 14).
• On the left side of the SpinBox, the tilting lever is now pressed against the bearing block of the rotor bearing unit.
• Close the SpinBox.

Inserting the feeler gauge
• Insert a 0.6 mm thick feeler gauge between the hang-up part (2) and the tilting lever (3) of the bearing block. (Fig. 15)
Inserting the setting gauge

The setting gauge (4, Fig. 16) is fitted to the inner side of the brake linkage device from the underside of the machine with the SpinBox closed.

- Unlatch the belly pan.
- Insert the setting gauge for the brake (4) so that the two pins engage in the opening of the lifting lever (5) and in the opening of the connecting sleeve (6).

Setting the brake linkage device

- Loosen the adjusting screw (7) of the rotor brake lever.
- Pull the rotor brake lever (8) with your hand lightly downwards, until it rests without play against the locking roll (9).
- Tighten the adjusting screw (7).
- This setting remains correct even in the case of slightly worn brake blocks.

Removing the gauges

- Remove both gauges and the wedge.

Raising the belly pan

- Raise the belly pan to the operating position.
3.4 Setting of axial rotor position

The thrust bearing is set during assembly and, normally, need not be adjusted later on. Subsequent adjustment may, however, be necessary after repair. The nut of the adjusting screw is marked with a lacquer.

Required tools:

- Setting gauge (A, 954.1399)
- Setting gauge SE 10/SE 11 hybrid/SC/SQ (B, 957.2358)
- Dial gauge (C, 951.5217)

Prerequisites:

- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

Setting the distance between adjusting screw and rotor tip

- Open the SpinBox cover.
- Remove the rotor from the SpinBox.
- Remove the navel and, if necessary, the washer, from the channel insert.
- Loosen the counter nut (1, Fig. 17) and turn the adjusting screw (2) a few turns back (away from the rotor).
- Insert the setting gauge until it rests against the stop.
- Pull the setting gauge about 2 mm back.
- Close the SpinBox cover carefully (it must not snap) and press it lightly against the rotor chamber.
- Open the cover of the SpinBox.
- Place the dial gauge on the rotor chamber. (Fig. 18)
- Set the initial point for measuring by turning the adjusting screw of the gauge until the first pointer is on an easily readable value.
- Remove the dial gauge.
- Turning it slightly, press the setting gauge against the stop.
- Place the dial gauge on the rotor chamber again.
- Turn the adjusting screw, until the difference between the first and the second measurement is 0.4 mm to 0.7 mm.
• **Tip:** Set the value at 0.5 mm, as this is easily readable on the dial gauge.
• Tighten the counter nut.

**Checking the distance between adjusting screw and rotor tip**

- Open the SpinBox cover.
- Remove the rotor from the SpinBox.
- Remove the navel and, if necessary, the washer, from the channel insert.
- Insert the setting gauge until it rests against the stop.
- Pull the setting gauge about 2 mm back.
- Close the SpinBox cover carefully (it must not snap) and press it lightly against the rotor chamber.
- Open the cover of the SpinBox.
- Place the dial gauge on the rotor chamber (Fig. 18).
- Set the initial point for measuring by turning the adjusting screw of the gauge until the first pointer is on an easily readable value.
- Remove the dial gauge.
- Turning it slightly, press the setting gauge against the stop.
- Place the dial gauge on the rotor chamber again.
- The rotor position is correct, if the difference between the first and the second measurement is 0.4 mm to 0.7 mm.

**Closing the SpinBox**

- Insert the navel and, if necessary, the washer.
- Insert the rotor
- Close the SpinBox.
3.5 Centring of channel plate

This setting is only required if the centring plate (1) has been unscrewed.

Required tools:

- Setting gauge for opening unit SE 7-10/SC/SQ (A, 957.6469)
- Centring gudgeon SE 9/10/SQ 9 (B, 954.1406)
- Centring cone SE 7/8/9 (C, 954.1134)
- Centring cone SE 10/SQ (D, 957.5227)

Prerequisites:

- The machine is stopped.
- The main switch is in the "O" position, padlocked and the warning sign is attached to it.
- The belly pan is released.

Centring of channel plate

- Open the cover of the SpinBox, until it is in position for maintenance.
- Remove the opening unit.
- Install the setting gauge (A).
- Enter the centring gudgeon (B) instead of the rotor.
- Install the centring cone (C) instead of the navel.
- Loosen the fixing screws (2) of the centring plate.
- Close the cover cautiously.
- The centring cone (C) takes a concentric position to the centring gudgeon (A).
- Push the channel plate against the stop (3) of the setting gauge. (Make use of the borehole clearance [2]).
- Tighten the screws (2) (cover still being closed).
ATTENTION

The channel plate must be flush with the housing on the left side (Fig. 21).
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