

SPIRAL SUPPORT

# Spiral Conveyor Checklist after installation



## After installation check:

- The red chain shortening tool is removed from the chain tensioning system (see section 3.4.1. of the manual for details). Please store the shortening tool for use during maintenance. This is only applicable for Spiral Conveyors with a coil spring tensioning system.
- The oil level of the gear motor is correct.
- The breather plug on the motor is correctly installed.
- The bracing on the spiral has been installed (only applicable for Spiral Conveyor with an outfeed higher than 5m). See Appendix 4 of the manual for details.
- The chain tension of the Spiral Conveyor is set correctly, the indicator is in the green part (see section 3.4.1. of the manual for details).
- The pressure on the pneumatic chain tensioner is correct. This only applies if a pneumatic chain tensioner is installed (see section 3.4.1. of the manual for details).
- The height difference between the upstream and downstream conveyors at the in- and outfeed is correct. For a correct functioning of the Spiral Conveyor the following is recommended (see section 3.3 of the manual for details):
  - Height of the upstream conveyor is slightly higher (1-3mm) than the Spiral Conveyor.
  - Height of the downstream conveyor is slightly lower (1-3mm) than the Spiral Conveyor.
- The Spiral Conveyor is mechanically locked on the floor (see Appendix 4 of the manual for details).
- The ramp-up and ramp-down time set in the software is greater than 3 seconds.
- The control software will give a warning when the chain tension monitoring sensor is activated (disconnect the plug to simulate activation). See section 3.4.1. of the manual for details.
- The control system provides a warning when the proximity switch of the overload system does not give any signal. Hint: this can be checked by pulling the motor away from the sensor.

**Read next page →**

## Slow start

Start by running the machine at 25% of the velocity and check the following:

- During startup check that the Spiral Conveyor is running in the correct direction. If not, stop the spiral conveyor immediately and check motor cabling.
- Manually activate the overload protection system by pulling the motor backwards (see section 3.4.2 of the manual for details). In case the motor cannot be pulled backwards disconnect the plug of the proximity sensor, this simulates activation of the overload protection system. Check that:
  - The Spiral Conveyor performs an emergency stop
  - The conveyors upstream of the Spiral Conveyor performs an emergency stop
  - The system can only be activated after a manual reset of the system
- The chain tension of the Spiral Conveyor is set correctly, the indicator is in the green part (see section 3.4.1. of the manual for details).
- The second chain tension monitoring sensor is correctly installed. This is not standard installed on a spiral conveyor but can be installed as an option. Disconnect the plug of the sensor to simulate activation).
  - The Spiral Conveyor performs an emergency stop
  - The conveyors upstream of the Spiral Conveyor performs an emergency stop
  - The system can only be activated after a manual reset of the system
- In case of a pneumatic chain tensioner, cut off the air supply and check:
  - The Spiral Conveyor performs an emergency stop
  - The conveyors upstream of the Spiral Conveyor performs an emergency stop
  - The system can only be activated after a manual reset of the system
  - The system can only be activated after restoring air supply
- Disconnect the cable of the thermal sensor of the motor in the electrical cabinet and check:
  - The Spiral Conveyor performs an emergency stop
  - The conveyors upstream of the Spiral Conveyor performs an emergency stop
  - The system can only be activated after a manual reset of the system
  - The system can only be activated after reconnecting the thermal sensor of the motor

### **Increase the speed of the Spiral Conveyor to operating speed (never greater than 60 m/min)**

- The speed of the upstream conveyor is the same as the Spiral Conveyor
- The speed of the downstream conveyor is the same as the Spiral Conveyor
- The chain tension of the Spiral Conveyor is set correctly, the indicator is in the green part (see section 3.4.1. of the manual for details).

### **Start transporting product in the Spiral Conveyor**

- The distance between two products is higher than 1/3 the product length.
- The products are supplied to the Spiral Conveyor in the center of the slats.
- The products are not damaged and do not tilt.

### **When the spiral is running at normal operating capacity**

- The chain tension of the Spiral Conveyor is set correctly, the indicator is in the green part (see section 3.4.1. of the manual for details).
- The level of proximity switch on the chain tension monitoring system is set correctly (see section 3.4.1 of the manual for details).



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