Conditions for MultiFlex screw feeder Installation

1) The MultiFlex system must be embedded in the fixed foundation slabs, where the maximum deviation of the buried points from the plane must not be bigger than ±5mm.

2) The steel structure in which the MultiFlex is embedded must be without any vibrations and any other static or dynamic deformations.

3) The maximum temperature of the environment in which the MultiFlex may be installed must be less than 65°C.

4) The feeder may be operated only with the material that is specified in the Data Sheet related to the Contract. Schenck Process shall not be liable for any damage caused by using any material that fails to comply with the Data Sheet.

5) The refilling limits have to be set on the basis of the minimum and maximum weight. The overfilling sensor (MAX MAX) must be used solely for the indication of any incorrectly set upper weight limit (e.g. through a big change of the material bulk density), but in no case for the setting of the upper refilling level during normal operation. In using the materials for which the MultiFlex is designed, the continuous contact of the sensor with the material may result in material adhering to the sensor or material fibres winding around the sensors, which may thus cause sensor failures.

6) The overfilling sensor has to positioned in relation to the material angel of repose to certainly indicate maximal level of material in the inlet chute area. At the same time it has to be outside of the material falling stream. (see Fig. 1) The overfilling sensor can not reach into the agitator moving area.
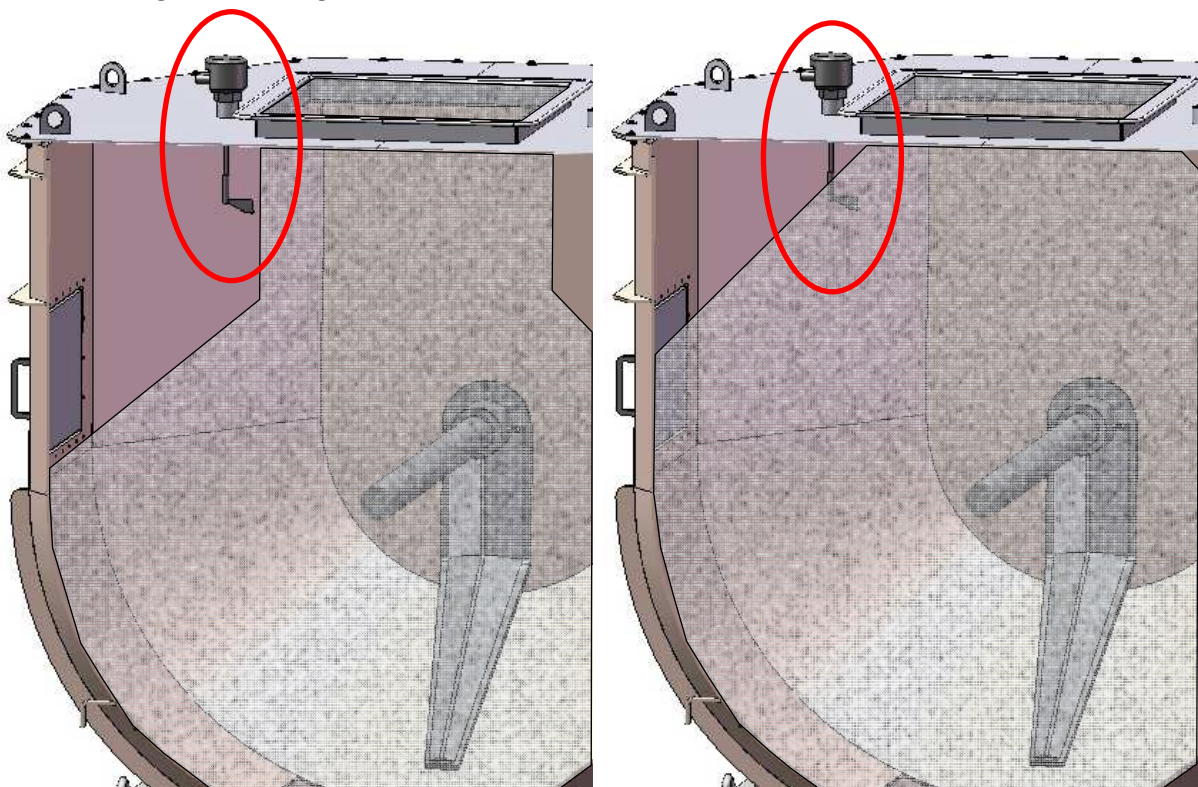

Fig. 1: Optimal position of the overfilling sensor in relation to the material angel of repose.

7) Any overpressure, underpressure, or its variations at the point of connection of the conveying line to the MultiFlex hopper inlet affects the weighing accuracy and hopper refilling control.

8) The system designed for refilling the MultiFlex bin with material must allow the feeder storage bin to be periodically refilled between to the limit weight values. That must take into consideration the storage bin capacity, material bulk density and its variations and material repose angle. It is also possible to refill the MultiFlex continuously, and in any such case the feeding system, including the previous conveying lines must be able to control the weight level in the hopper, usually in a range of 50%-80% of the utilizable volume (weight). The feeding system must allow the on stream calibration from time to time. The calibration period depends on changes of material characteristics (bulk density, moisture, granulometry) and should be in a range of several hours or days.

9) Free output of the material from the feeder outlet must not be blocked in any manner. Potential clogging of the downstream conveying line, causing the blocking of screws / spirals, may result in considerable damage or even destruction. The user must provide the upstream conveying line under the scale outlet (chute, transition section) with corresponding sensors to indicate any overfilling or clogging. (see Fig. 2) In no case, Schenck Process shall be liable for any damage to the MultiFlex feeder caused by the blocking of downstream conveying line. By reducing the power supply for the drive of the screws or spirals in the frequency converter, and thus by decreasing the maximum torsion moment, it is possible to reduce, but not eliminate their potential damage.
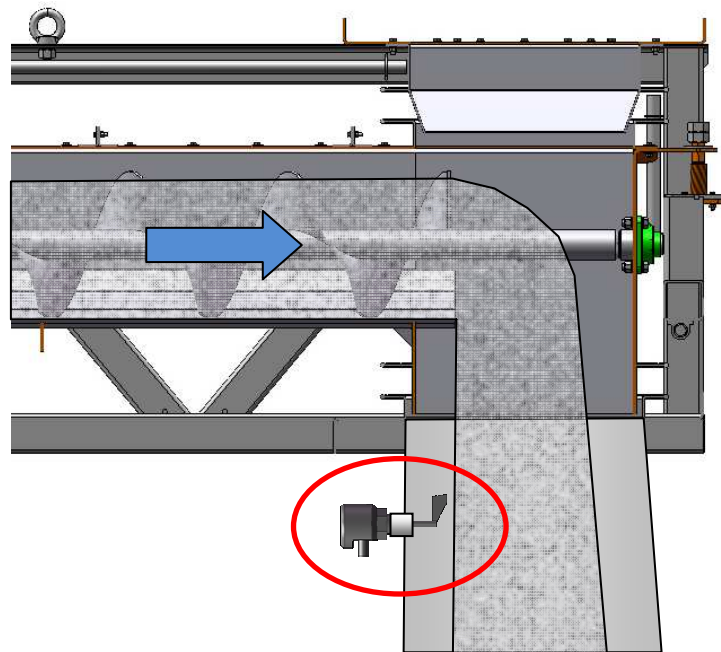

Fig. 2: The clogging sensor is installed outside, but near the discharged materials to indicate any increasing material.

10) In putting the system into operation, it is recommended to reduce the maximum allowable current values on the frequency converter to 70% of the nominal value in order to reduce the risk of damage due to improper handling.

11) The cables connecting the fixed and weighed sections (feeding chute, hopper) must be very soft and sufficiently long to form a free loop so that the transfer of any disturbing forces will be minimized. Example of recommended cable: 2YSLCYK-J