

CCS: SHAFTLESS SCREW CONVEYORS



The CCS – SHAFTLESS SCREW CONVEYOR is our highly customizable solution for the waste conveyor.

It is constituted by a shaftless screw which, once actuated by the motor gear, rotates on its own transporting the loaded material towards one or more discharge outlets (eventually equipped with a guillotine closing).

The machine can be supplied in two different configurations:

- On pull: where the spiral that pulls the material towards the discharge outlet in the vicinity of the geared motor.
- On push: where the material is pushed towards the outlet at the opposite side of the gear motor.

The drive can be effected via direct connection of the spiral to the gear motor, or by a geared motor transmission system - chain - flange of the spiral shaft. The absence of the central shaft makes these machines suitable for the transport of sticky materials, typically sludge and sediment, which would otherwise tend to stick to the shaft of the loop. The machine's working range is between 0 ° and 30 ° of tilt, with a carriage return that falls with increasing inclination. Our conveyors can be manufactured in vertical installation version called CCS-V – VERTICAL SHAFTLESS SCREW CONVEYOR .

This solution has the great advantage to reduce system footprint necessary and to lift up screenings/sludge until 20mt height. Execution can be made with shaftless spiral rotating inside an external pipe or two U troughs bolted together.

DESCRIPTION

- Manufacturer: FLUITECO
- Model: CCS - SHAFTLESS SCREW CONVEYOR
- Material: Stainless Steel
- Surface Treatment: Pickled & passivated

APPLICATIONS

- Sludge and Screening transport
- Industrial wastewater treatment

WORKING PRINCIPLE

Shaftless screw conveyors consists of an Archimedean screw, without internal shaft, driven by a power transmission, rotating inside a trough carrying material loaded through one or more hoppers, to one or more exhaust ports, possibly equipped with shut-off sliding valve. The machine can be in a “pull” configuration, i.e. it pulls the material from the towards the outlet, being the drive after the outlet spout, or in a “push” configuration when the material is pushed by the spiral towards the drain.

The power transmission can be direct, with the gearbox’s output shaft directly connected with the screw flange, or it can be a system consisting of motor drive system – chain – flanged shaft connected with the screw.

Shaftless screw conveyors are suitable to transport clogging materials, such as sludges or screenings, which otherwise would tend to stick to the shaft of the screw.

The working range of the conveyor is typically between 0° and 30°, with decreasing efficiency proportional to the increasing inclination.

FIELDS OF APPLICATIONS

- Municipal wastewater for sludges & grindings
- Papermil
- Food Industry
- Slaughterhouses
- Industrial plants

FLOWRATES

Inclination	Screenings		Sludge	
	0° - 15°	16° - 30°	0° - 15°	16° - 30°
MODEL				
DN 150	0.5	0.3	1.5	1
DN 200	1	0.7	3.3	1.5
DN 250	2.5	1.6	6.5	4
DN 300	3.7	2	11	6.5
DN 350	5.2	2.5	16	9
DN 400	7.5	4	20	12
DN 500	15	8.2	41	25
DN 600	20	16	52	35



SPECIAL INSTALLATIONS

