



# SCREW TUBE CONVEYOR

TTS 150 EX

Screw Tube Conveyor TTS 150 EX produced by TAURUS, s.r.o., Chrudim, is a machine designed for transport of loose materials.

By its design of a shaft with helix and a transport trough, the conveyor prevents transmission of dangerous effects of explosion, flames, and sparks between separated premises with flammable dust explosion hazard in both directions up to pressure  $p_{red,max}$ . The Machine constitutes a "protective system" according to Article 9 of directive 94/9/EC and it is manufactured in accordance with Government Decree No. 23/2003 Coll., EN 13463-1, 13463-5, EN 15089, EN 14460.

The device was designed, constructed and manufactured for transport of material with specific density of approx.  $750 \text{ kg/m}^3$ ,  $\text{H}_2\text{O}$  content up to 10%, fat or oil content up to 18%, temperature up to  $100^\circ\text{C}$ , and with max. tilt of  $30^\circ$  from horizontal plane.

PROTECTIVE SYSTEM - D St1 II 1D/2D  $\leq 125^\circ\text{C}$



Item	Unit	TTS 150 EX
Max. conveyor tilt	$^\circ$	$30^\circ$
Helix diameter	mm	150
Worm tube diameter	mm	176
Pitch	mm	150
Conveyor length	m	1.9-1.5
Rated transport capacity	$\text{t}\cdot\text{hour}^{-1}$	2-9

Device use: Internal machine environment – atmosphere with explosion hazards, zone 20

Device classification: Category 1D/2D, Equipment Group II according to Government Decree No. 23/2003 Coll.

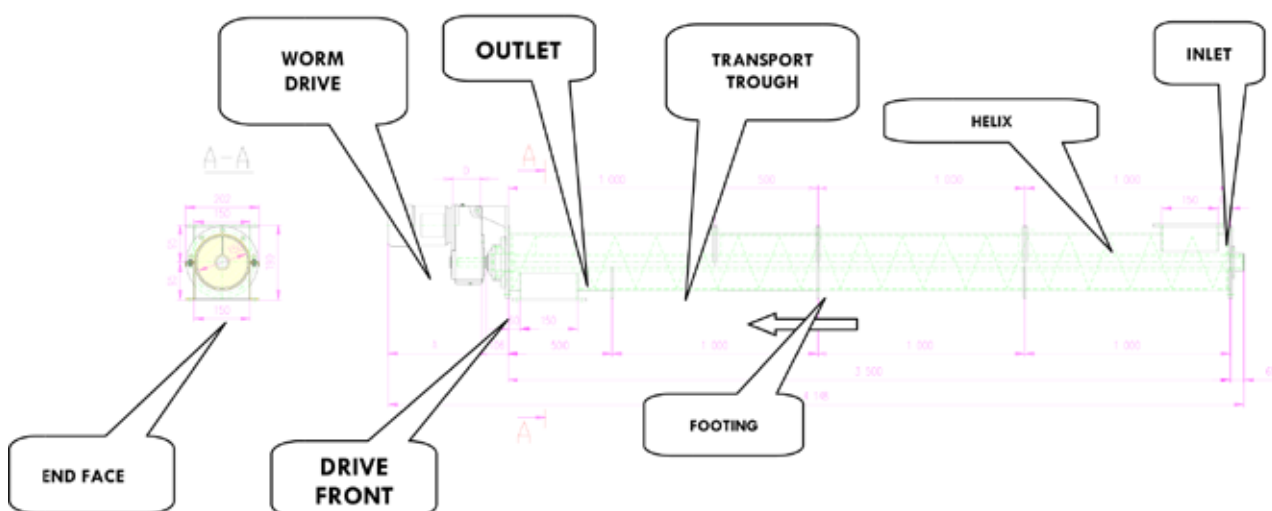
Device: Protective system

Device pressure resistance $p_{red,max}$ 100 kPa	Max. temperature up to $125^\circ\text{C}$	Explosion Hazard Group St 1	Explosion Hazard Constant Kst $20 \text{ MPa m}\cdot\text{s}^{-1}$
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Part	VERSION	
	STAINLESS STEEL	NORMAL
Helix tube	carbon steel cl. 11	
Helix	carbon steel	
Worm faces	carbon steel	
Worm tube and worm cover	stainless steel cl. 17	carbon steel cl. 11



## Basic Dimensions of the Machine



CONVEYOR LENGTH [m]	A	B	C	D
1.9 - 5	477	107	386	162
5 - 10	586	107	418	162
10 -15	604	123	438	181

### Machine Description

The transport trough is assembled of chosen number of parts connecting the face with drive and the face with end bearing located in a bearing housing on a conveyor end face bracket.

TTS drive is fixed to a bracket on conveyor face. The lower section of the tube is fitted with an insert made of wear resistant material, on which the helix moves. For easy checking, the casing is produced with appropriate number of removable covers fitted with inserts made of wear resistant material.

The tube shaft is produced in the required length. On one end, it is placed in a roller bearing; on the other, in a sliding sleeve. The helix is welded to the shaft. Inlet and outlet - the inlet and outlet necks are placed in the required number on the upper or lower part of TTS. They serve for connection to the down-pipes or to outlets with manual or remote control of slide gates. Their number and size is determined by the designer upon agreement with the manufacturer.

Each TTS is standardly delivered with 1 inlet and 1 outlet, including counter-flanges, and joining and sealing material. The supporting footing serves for TTS support on a floor or on a steel construction. In designing and machine positioning on a solid foundation or construction, spacing between footings equal to  $2000 \pm 500$  mm has to be observed.