

- A Weigh belt feeder
- B Control Module
- C Operator interface
- External communication

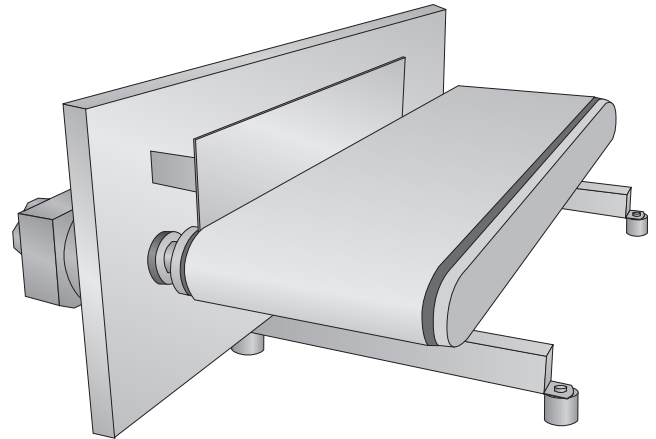
Each K-TRON Smart Weigh Belt Feeder consists of the components A, B and C.

Component A is specified in this spec sheet.

Application

The Smart Weigh Belt Feeder is used for continuous controlled gravimetric feeding of bulk materials. The unit can also be used for gravimetric batch feeding or for continuous metering of bulk material flow.

The SmartConnex® control system allows individual or a multi-component control. Interface-modules for computer communication are installed in the control module.



SWB-300 Open Frame (belt width 300mm)

Design

The stainless steel belt conveyor frame includes the primary material weigh bridge and an optional secondary continuous auto tare weigh bridge. The conveyor frame is removable on a telescopic support structure.

The continuous woven belt is driven by a EPDM (FDA approved) coated discharge pulley. Continuous belt tensioning is achieved through a spring loaded assembly and belt removal is accomplished through a simple release of that assembly. Continuous automatic belt tracking is assured by K-TRON's well proven tracking and internal belt cleaning technology. A secondary internal belt scraper is employed prior to the idler pulley. The idler and drive pulley are equipped with stainless steel scrapers and the external surface of the belt is scraped clean at the discharge point.

The unit is supplied with a DC drive motor and robust helical/worm 90° gear reducer. Belt speed is sensed via an optical encoder on the idler pulley (for general purpose applications).

Material flow onto the belt/weigh bridge is set through a customized inlet chute. The flow must line up exactly with the weighing platform. Side skirts prevent material spillage on the conveyor.

Material weight on the primary weigh deck and belt tare weight on the secondary weigh deck are determined by K-TRON's patented SFT III weighing technology with vibration and temperature immunity, zero deflection and 1 part in 1 million resolution. The control employs belt segmentation and weight shift technology to achieve control of material rate at the discharge point.

The SWB300 and SWB600 can be supplied as open (shown here) or closed frame (see S-030201) units .

Hazardous Location Options: (see sheet I-000002)

- NEC Class II, Div. 2, Groups F & G / Class II, Div. 1, Groups F & G
Class I, Div. 2, Groups C & D / Class I, Div. 1, Groups C & D
- ATEX 3D/3D, 3G/3G, 2GD/2GD (outside/inside)

Feed rates

Belt speeds are controlled to within +/- 1 RPM over a 100:1 range from full motor speed. Three standard ranges of drive reducers are available: 20:1, 40:1, 80:1. The customized inlet device should not be larger than 230 x 100 mm (9 x 4 in) for the SWB-300-O and 450 x 100 mm (18 x 4 in) for the SWB-600-O.

Material bulk densities can range from 0.5 to 2.5kg/l (31 to 156 lb/ft³)
Material particle size can be a max. of 10mm (0.4")

	kg/hr	dm³/hr	lb/hr	ft³/hr
SWB-300-O	20 – 20 000	10 – 40 000	44 – 44 000	0.4 – 1 400
SWB-600-O	40 – 40 000	20 – 80 000	88 – 88 000	0.7 – 2 800

Rates may vary with materials and conditions.

Technical Data

Materials of Construction:

Frame:	Stainless steel, DIN 1.4301, 220 ground and brushed, 304 No. 4
Conveyor:	Stainless steel, DIN 1.4301, 304 electro polished
Material contact surfaces:	Stainless steel DIN 1.4404, 316L electro polished
Weigh bridge:	Aluminium, cast, powder coated (FDA approved)
SFT III:	Aluminium, Nickel plated Aluminium, powder coated housing
Belt:	Silicone or Polyurethane
Gaskets/Seals:	White or gray FDA conforming material

Temperature rating:

Process material:	0...40.5°C (32...105°F)
Temperature change:	< +/- 5°C (< +/- 9°F) per hour

High temperature option:

Process material:	0...80°C (32...176°F)
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Shipping weight:	SWB-300-O	125kg (275 lbs)
(without packaging)	SWB-600-O	160kg (352 lbs)

Painted surfaces:

Motors and reducers: RAL 7035 (light gray)

Motor: 0.45kW (0.5 H.P.), IP 55 (NEMA 12), Flange mounting IEC 71/B5 (56 C Face)

Reducer: Helical/Worm 90°, 20:1,40:1,80:1

SFT III protection: IP 65 (NEMA 4)

Speed pickup protection: IP 65 (NEMA 4)

Min. Beltload: with 1 weighbridge: 2 kg/m (1.36 lbs/ft)
with 2 weighbridges: 1 kg/m (0.68 lbs/ft.)

Setpoint turndown: 1:20

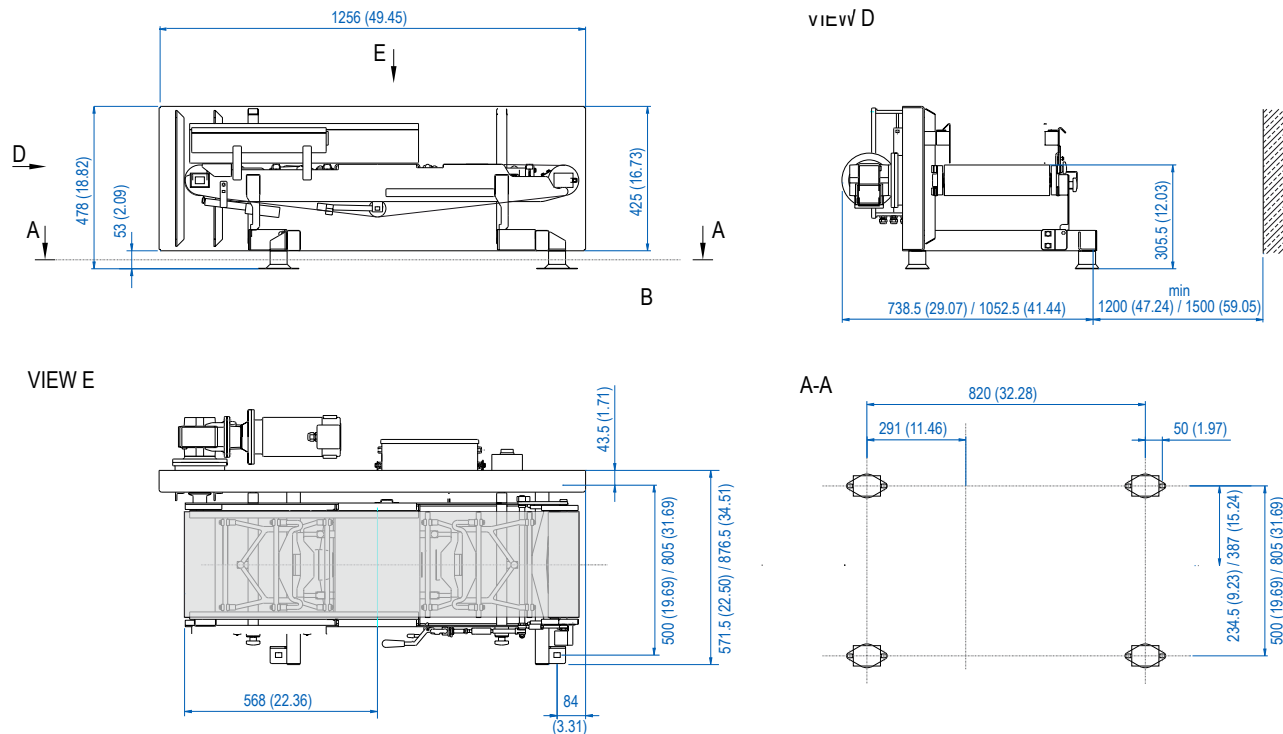
Min. batch size: 0.5kg (1lbs)

Options:

1. Mounting stands
2. Special paint
3. Right hand frame construction
4. Food Grade version
5. High temperature version

Dimensions SWB-300-O / SWB-600-O *Drawing not to scale.*

Measurements shown for SWB-300 -O followed by SWB-600-O in mm(in). Where one measurement is shown it applies to both models.



Caution: these measurements are for general reference only. Please consult dimensional drawing for exact measurements