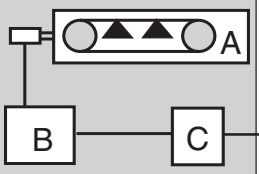
K-TRON SODER

K-TRON SODER Product Specification
Smart Weigh Belt Feeder

SWB-300-N
SWB-600-N



A Weigh belt feeder
B SCM (Smart Control Module)
C Operator interface
External communication

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

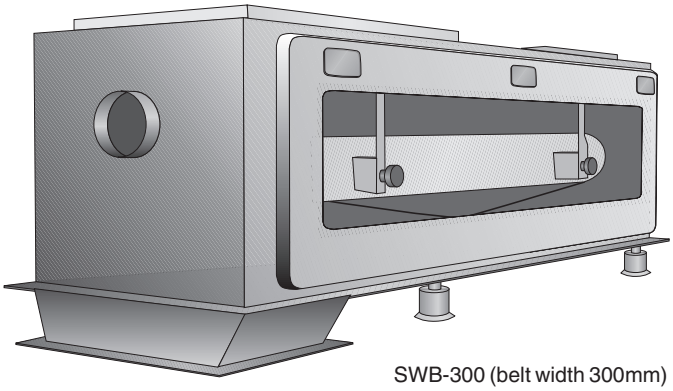
Component A is specified in this spec sheet.

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 unit includes a Smart Control Module (SCM) that provides for all control, motor drive and interface functions. The SCM is feeder or control panel mounted.

The SCM can be connected to three levels of operator interfaces. The operator interface options are defined on KSU, KSL and KSC standard sheets.



SWB-300 (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 from the stainless steel housing. Gasketed side and top covers include full length windows and, when mounted, provide for a dust tight enclosure (the SWB-600 only has a window in the front cover).

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 stainless steel inlet chute with adjustable gate height. 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 unit can be supplied with pre feeder units such as rotary valves, screw feeders or vibratory trays.

The SWB-300 and SWB-600 are available as closed (shown above) or open frame (see S-030202) units.

Feed rate

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. Three standard widths of inlet gates are available:

SWB-300: 75mm (3"), 150mm (6"), 230mm (9")
SWB-600: 300mm (12"), 375mm (15"), 450mm (18")

Material bulk densities can range from 0.5 to 2.5kg/l (31 to 156 lb/ft^3)
Material particle size can be a max. of 10mm (0.4")

	kg/hr	dm^3/hr	lb/hr	ft^3/hr
SWB-300	20 – 20 000	10 – 40 000	44 – 44 000	0.4 – 1 400
SWB-600	40 – 40 000	20 – 80 000	88 – 88 000	0.7 – 2 800

Rates may vary with materials and conditions.

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Technical Data

Materials of Construction:
- Housing: 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

Painted surfaces:
- Motors and reducers: RAL 7035 (light gray)

Motor: 0.45 kW (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: 0.5 kg (1lbs)

Design pressure: atmospheric

Temperature rating:
- Storage: –40…80°C (–40…176°F)
- Process material: 0…50°C (32…122°F)
- Temperature change: < +/– 5°C (< +/– 9°F) per hour

Low temp. option:
- Process material: –25…50°C (–13…122°F)

High temp. option:
- Process material: 0…160°C (32…320°F)

Air flow for dust exhausting:
- SWB-300: 22 m³/h (777 ft³/h)
- SWB-600: 44 m³/h (1554 ft³/h)

Shipping weight: (without packaging)
- SWB-300: 140 kg (308lbs)
- SWB-600: 180 kg (396lbs)

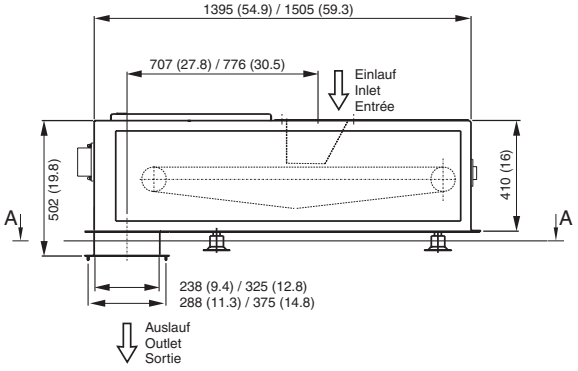
Options:

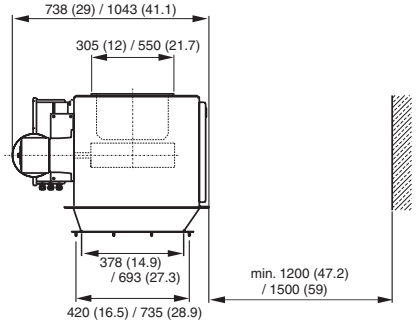
1. Low temperature operation
2. High temperature operation
3. Inlet shutoff gate
4. Flexible connections
5. Sampling valves (automatic and manual)
6. Mounting stands
7. Vibrating inlet
8. Inlet hoppers
9. Special paint
10. Service cover in stainless steel without window
11. Right hand frame construction
12. Design pressure up to 50mbar
13. Food Grade version

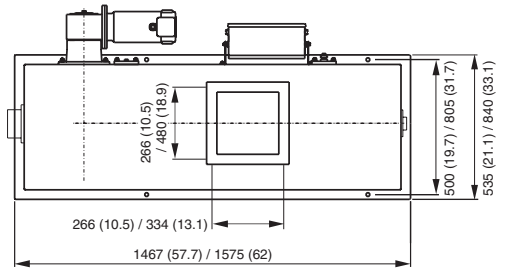
For XP applications consult factory.

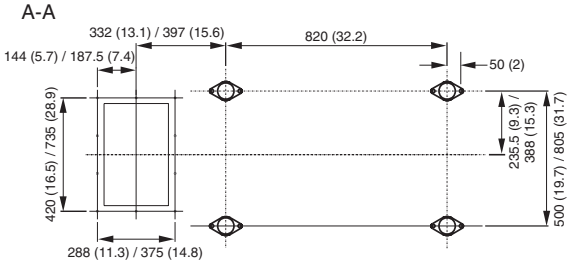
Dimensions SWB-300 / SWB-600

Measurements shown for SWB-300 followed by SWB-600 in mm(in).
Where one measurement is shown it applies to both models.
Drawing not to scale.









Not a certified drawing.

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