

Overview



SITRANS WW100 is a high-accuracy, low-capacity weighfeeder used for minor ingredient additives.

Benefits

- High accuracy
- High turn down ratio; 100 to 10 % of capacity
- Corrosion resistant components
- Fast and easy belt removal for replacement or cleaning
- Simple installation, easy to clean and maintain
- Available with gear or servomotor

Application

SITRANS WW100 is one of the most accurate in-motion weighing systems on the market. It is specially designed for high accuracy on light loading processes. The design eliminates material buildup to ensure accurate, reliable measurement.

The unique long length platform weigh bridge mounts directly to a corrosion-resistant platform load cell. An adjustable mechanical shear gate profiles the material and fixes the correct material bed depth for a given material particle size. The belt speed can be automatically adjusted to attain the correct feed rate.

Standard components include an anti-static food grade belt, gravity tensioned roller, tail pulley driven belt for maximum weighing accuracy, belt tracking rollers, belt scraper and plow for self-cleaning.

Selection and ordering data

SITRANS WW100 Weighfeeder		Article No.										
Compact design with capacity up to 25 m ³ /h (880 ft ³ /h).		7	M	H	7	1	8	0	-	.	.	.
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.												
Add order code Y71 ... Y73 for all models to -specify design data.												
Frame and enclosure construction												
304 stainless steel open style		0		B								
316L stainless steel open style		0		D								
304 stainless steel enclosed style with painted mild steel enclosure		1		B								
304 stainless steel enclosed style with 304 stainless steel enclosure		1		D								
316L stainless steel enclosed style with painted mild steel enclosure		1		G								
316L stainless steel enclosed style with 304 stainless steel enclosure		1		J								
316L stainless steel enclosed style with 316L stainless steel enclosure		1		M								
Material containment construction												
Add order code Y74 and plain text: "Arc radius in inches ... XX.XXX inch" for options A ... H												
Shear gate inlet and skirtboards 304 stainless steel											A	
Shear gate inlet and skirtboards 304 stainless steel with cover											B	
Shear gate inlet and skirtboards 304 stainless steel, #4 polished											C	

SITRANS WW100

Selection and ordering data (continued)

SITRANS WW100 Weighfeeder Compact design with capacity up to 25 m ³ /h (880 ft ³ /h).		Article No. 7MH7180-●●●●●-●●●	
Shear gate inlet and skirtboards 304 stainless steel, #4 polished with cover			D
Shear gate inlet and skirtboards 316L stainless steel			E
Shear gate inlet and skirtboards 316L stainless steel with cover			F
Shear gate inlet and skirtboards 316L stainless steel, #4 polished			G
Shear gate inlet and skirtboards 316L stainless steel, #4 polished with cover			H
Horseshoe inlet 304 stainless steel ¹⁾			J
Horseshoe inlet 304 stainless steel, #4 polished ¹⁾			K
Horseshoe inlet 316L stainless steel ¹⁾			L
Horseshoe inlet 316L stainless steel, #4 polished ¹⁾			M
Load cell			
6 kg (13.2 lb) stainless steel, hermetically sealed			4
12 kg (26.5 lb) stainless steel, hermetically sealed			5
30 kg (66.1 lb) stainless steel, hermetically sealed			6
Speed sensor			
1 000 PPR shaft mounted optical encoder			1
2 500 PPR shaft mounted optical encoder			2
1 000 PPR shaft mounted optical encoder, stainless steel			4
2 500 PPR shaft mounted optical encoder, stainless steel			5
Drive configuration			
Standard AC gearmotor without drive (Drive required for desired belt speed)			
Add order code Y76 for electrical style: IEC, UL-R/CSA or CCC. Add order code Y75 reduction ratio in plain text: "X:1".			
220 ... 240/380 ... 480 V 3 ph 50/60 Hz AC		6	A
575 V 3 ph 60 Hz AC		6	B
Food grade AC gearmotor without drive (Drive required for desired belt speed)			
Add order code Y76 for electrical style: IEC, UL-R/CSA or CCC. Add order code Y75 reduction ratio in plain text: "X:1".			
220 ... 240/380 ... 480 V 3 ph 50/60 Hz AC food grade gearmotor		7	A
575 V 3 ph 60 Hz AC food grade gearmotor		7	B
SIMOTICS servomotor without accessories			
Control unit, BOP, power module and input choke as well as power and communication cables should be ordered separately.		8	A
Calibration Method			
None			A
1 calibration chain strand approx. 2.41 kg/m (1.62 lb/ft)			B
2 calibration chain strands approx. 4.82 kg/m (3.24 lb/ft)			C
3 calibration chain strands approx. 7.23 kg/m (4.86 lb/ft)			D
Belt change access side (looking from inlet to discharge)			
Left hand			0
Right hand			1

Selection and ordering data	Order Code
Further Designs	
Please add "-Z" to article no. and specify order code(s).	
Application Eng. reference number (max. 15 characters), specify in plain text.	Y31
Shear gate arc radius: Enter shear gate arc radius in inches (xxx.xx inch) ²⁾	Y74
Enter design units (TPH, MTPH, lb/h, kg/h)	Y71
Enter design speed (ft/m, m/s)	Y72
Enter design flowrate	Y73
AC gearmotor reduction ratio: Enter reduction ratio in plain text (X:1).	Y75
AC gearmotor electrical style: IEC, UL-R/CSA or CCC	Y76
Manufacturer's test certificate: according to EN 10204-2.2	C11
Declaration of incorporation of partly completed machinery acc. EC machine directive 2006/42/EC	C30

Selection and ordering data (continued)

Selection and ordering data	Order Code
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: measuring-point number/identification (max. 27 characters) specify in plain text.	Y15
Plastic shear curtain to control dust at the infeed for floodable materials and dusty applications ²⁾	G11
Nylon brush for belt cleaning, mounted below drive pulley	G14
Low weight belt for light loading, low rate applications (recommended for under 1 t/h). Anti-static, FDA approved.	G15
High temp belt for hot material applications [product temp up to 160 °C (320 °F)], food grade.	G17
Blue colored belt	G18
Food grade Polyurethane sealing at infeed area	G22
Discharge dust hood, painted mild steel with de-dust port ¹⁾	H50
Discharge dust hood, 304 stainless steel with de-dust port ¹⁾	H51
Discharge dust hood, 316L stainless steel with de-dust port ¹⁾	H52
Operating instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/weighing/documentation	
Spare parts	
Article No.	
6 kg (13.2 lb) stainless steel load cell	7MH5117-1QD00
12 kg (26.4 lb) stainless steel load cell	7MH5117-2BD00
30 kg (66.2 lb) stainless steel load cell	7MH5117-2KD00
1 000 PPR optical encoder ³⁾	6FX2001-2PB00
2 500 PPR optical encoder ³⁾	6FX2001-2PC50
Speed encoder plug-in with 3 m cable ⁴⁾	A5E50846036003
Speed Encoder, 1 000 PPR, stainless steel	A5E50846036001
Speed Encoder, 2 500 PPR, stainless steel	A5E50846036002
Skirtboard seals, white, 2 m length	7MH7723-1TH
Skirtboard seals, blue, 2 m length	7MH7723-1TJ
Calibration chain, approx. 2.41 kg/m (1.62 lb/ft)	7MH7723-1HP
Calibration chain, approx. 4.82 kg/m (3.24 lb/ft)	7MH7723-1HQ
Calibration chain, approx. 7.23 kg/m (4.86 lb/ft)	7MH7723-1HR
Customers interested in servomotor and drive spares and peripherals should consult a local sales person. For more information, please visit http://www.automation.siemens.com/aspa_app	
Standard belt, white	7MH7723-1SA
Standard belt, blue	7MH7723-1SB
Low capacity belt, white	7MH7723-1SC
Low capacity belt, blue	7MH7723-1SD
High temperature belt, white	7MH7723-1SE
Guide rollers, set of 2	7MH7723-1SH
Gravimetric tensioning device	7MH7723-1SJ
Telescopes for WW100, stainless steel	7MH7723-1SY
Circuit board for termination box	A5E03623963
Bearing replacement kit, 2 bearings each for headpulley and tailpulley	7MH7723-1HV
Pulley replacement kit, for head and tailpulley, crowned, with lagging	7MH7723-1HY
Belt cleaning kit	7MH7723-1HW
Enclosure latches, stainless steel, set of 5	7MH7723-1QT
Spare brush, 12 inch belt width	7MH7723-1SN

¹⁾ Available with Frame Construction options 0B ... 0D only.

²⁾ Available with Material Containment options A ... H only.

SITRANS WW100

Selection and ordering data (continued)

³⁾ For use with 5 V DC supply from RS 422 circuit card.

⁴⁾ For use with PPR optical encoders: 6FX20012PA50, 6FX20012PB00, 6FX20012PC50.

Technical specifications

SITRANS WW100	
Mode of operation	
Measuring principle	Strain gauge load cell and digital speed sensor
Typical application	Control and monitor feed rates and blending in bulk chemicals, tobacco, food, and water treatment
Measuring accuracy	
Accuracy ¹⁾	± 0.25 ... 0.5 %
Repeatability	± 0.1 %
Specified range	10 ... 100 % based on speed
Design rate range	45 kg/h ... 18 t/h (100 lb/h ... 20 STPH)
Max volumetric flow	25 m ³ /h (880 ft ³ /h)
Medium conditions	
Operating temperature	-10 ... +55 °C (10 ... 131 °F)
Material	Stainless steel [304 (1.4301) or 316L (1.4404)], bead blast finish (1 ... 6 µm, 40 ... 240 µin)
Load cells	
Construction	17-4 PH (1.4568) stainless steel
Degree of protection	IP68
Excitation	10 V DC nominal, 15 V DC maximum
Output	2 mV/V
• Non-linearity	± 0.02 % of rated output
• Non-repeatability	± 0.01 % of rated output
Capacity	Stainless steel range: 6, 12, 30 kg
Overload	150 % of rated capacity
Temperature	• Operating range: -40 ... +65 °C (-40 ... +149 °F) • Compensated: -10 ... +40 °C (14 ... 104 °F)
Speed sensors	
Optical encoder output	• RS 422 (TTL) 5 V DC, 150 mA max. • 1 000 or 2 500 pulses per revolution (ppr)
Degree of protection	• Standard: IP64 • Stainless steel: IP66
Temperature	-10 ... +70 °C (14 ... 158 °F)
Framework	• Precision machined, stainless [304 (1.4301) or 316L (1.4404)] or mild steel • Cantilevered design for easy belt replacement
Pulleys	115 mm (4.5 inch) diameter, crowned and lagged
Bearings	• 4-bolt flange mount on drive pulley • 2-bolt threaded base pillow block on driven pulley
Belt speed	0.005 ... 0.25 m/s (1 ... 50 fpm)
Belt support	Slider bed frame
Belting	• Polyester carcass with polyurethane top cover and static control with vulcanized endless finger splice for max. weighing consistency (standard); optionally available in blue and as low capacity belt; product temperature up to 110 °C (230 °F) • Belt properties in compliance with food safety Regulation (EU) No. 10/2011 and Regulation (EU) No. 1935/2004 • Meets FDA 21CFR and Halal • HACCP concept supported: resistant to hot water and ideal for frequent cleaning cycles • Silicone high temp belt for hot material applications [product temperature up to 160 °C (320 °F)], in compliance with Regulation (EU) No. 10/2011 and Regulation (EU) No. 1935/2004, meets FDA 21CFR

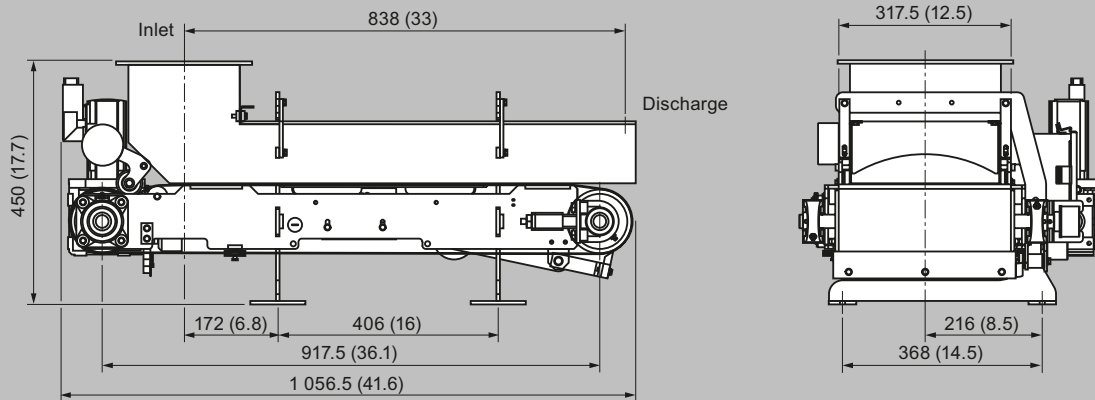
Technical specifications (continued)

SITRANS WW100	
Belt tension	• Counter-weighted stainless steel [304 (1.4301) or 316L (1.4404)] tensioning idler for consistent tension • Screw type, telescoper module with 25 mm (1 inch) travel, stainless steel 304 (1.4301)
Belt cleaning	• PE-HD blade type with counterweight at the head pulley for cleaning product side of belt • Return plow
Servomotor	SIMOTICS Servomotor; a SINAMICS drive, motor and communication cables to be ordered separately.
Standard gear-motor	Helical-worm geared motor, AC, Efficiency class IE1, IEC or UL-R/CSA, IP55, incl. PTC, RAL7031, C2 coating acc. EN12944.
Food grade gear-motor	Helical-worm geared motor, AC, Efficiency class IE3, IEC or UL-R/CSA, IP66, including PTC, corrosion resistant aluminum housing, sealed surface treatment nsd tuPH, complies with FDA.
Shipping weight	91 kg (200 lb) ... 181 kg (400 lb) maximum
Approvals	• Declaration of incorporation of partly completed machinery acc. directive 2006/42/EC. • Meets FDA and EU requirements for food processing

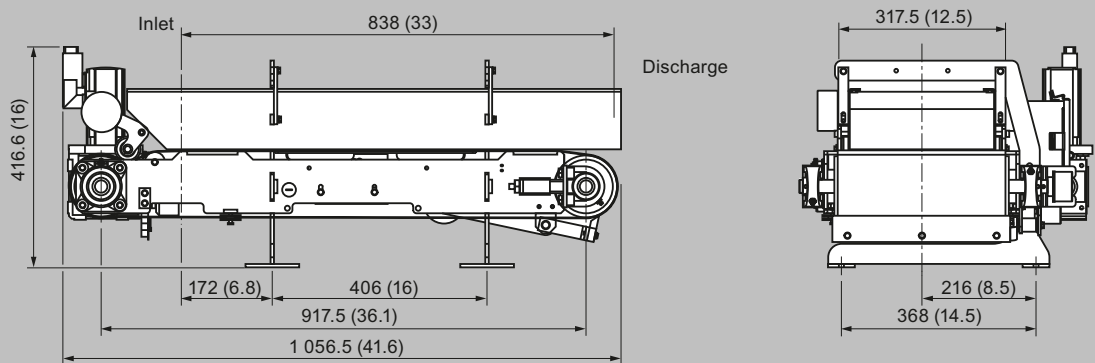
¹⁾ Accuracy subject to: on factory approved installations the weigh feeder system's totalized weight will be within the specified accuracy when compared to a known weighed material test sample. The test rate must be within the specified range of the design capacity and held constant for the duration of the test. The minimum material test sample must be equivalent to a sample obtained at the test flow rate for three revolutions of the belt or at least ten minutes running time, whichever is greater.

Dimensional drawings

Open Construction



Open Horseshoe Inlet

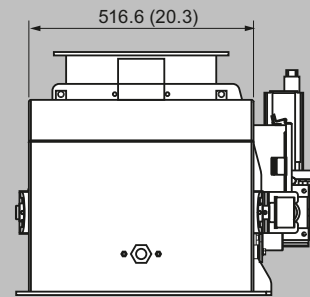
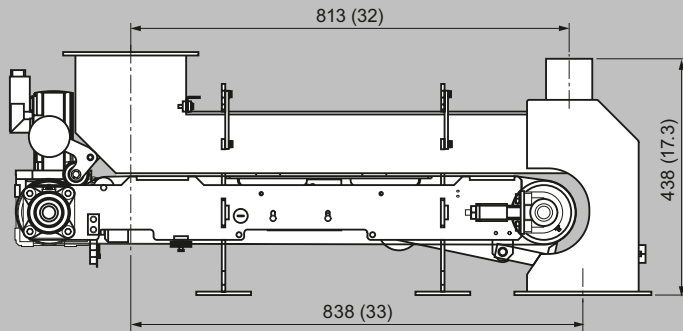


SITRANS WW100, dimensions in mm (inch)

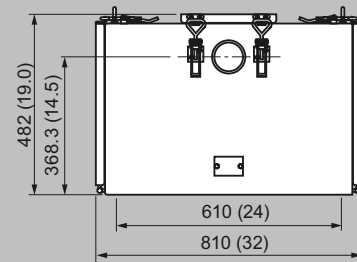
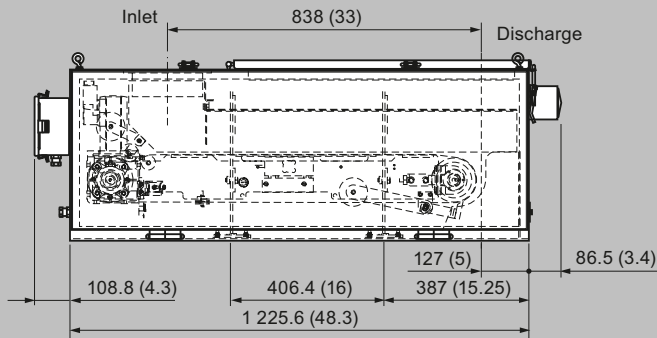
SITRANS WW100

Dimensional drawings (continued)

Open Dust Hood

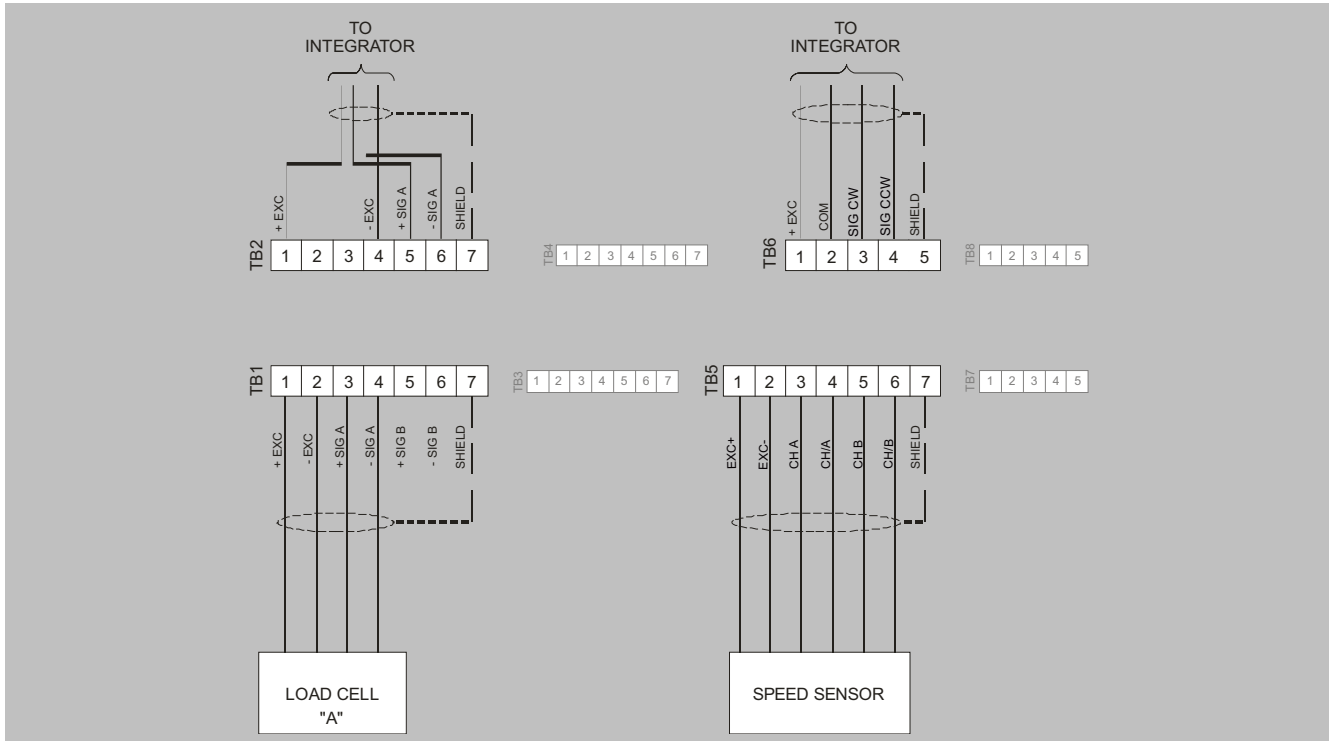


Enclosed Construction



SITRANS WW100, dimensions in mm (inch)

Circuit diagrams



SITRANS WW100 connections