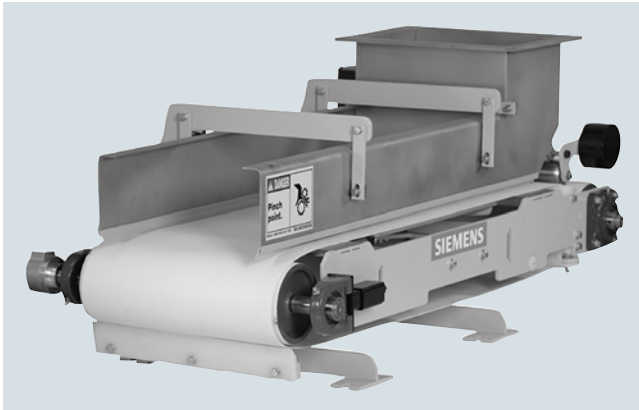


Weighfeeders

SITRANS WW100

Introduction

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.

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	<ul style="list-style-type: none"> Operating range: -40 ... +65 °C (-40 ... +149 °F) Compensated: -10 ... +40 °C (14 ... 104 °F)
Speed sensors	
Optical encoder output	<ul style="list-style-type: none"> RS 422 (TTL) 5 V DC, 150 mA max. 1 000 or 2 500 pulses per revolution (ppr)
Degree of protection	<ul style="list-style-type: none"> Standard: IP64 Stainless steel: IP66
Temperature	-10 ... +70 °C (14 ... 158 °F)
Framework	
	<ul style="list-style-type: none"> 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	
	<ul style="list-style-type: none"> 4-bolt flange mount on drive pulley 2-bolt threaded base pillow block on driven pulley
Belt speed	
	0.005 ... 0.36 m/s (1 ... 70 fpm)
Belt support	
	Slider bed frame

SITRANS WW100	
Belting	
	<ul style="list-style-type: none"> 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 100 °C (212 °C) Belt properties in compliance with food safety regulation (EU) 10/2011 and (EC) 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 177 °C (350 °F)], in compliance with (EU) 10/2011 and (EC) 1935/2004, meets FDA 21CFR
Belt tension	
	<ul style="list-style-type: none"> Counter-weighted stainless steel [304 (1.4301) or 316L (1.4404)] tensioning idler for consistent tension, required for high accuracy weighing Screw type, telescoper module with 25 mm (1 inch) travel, stainless steel 304 (1.4301)
Belt cleaning	
	<ul style="list-style-type: none"> PE-HD blade type with counter-weight at the head pulley for cleaning product side of belt Return plow
Servomotor	
	SIMOTICS Servomotor; optionally including SINAMICS S120 drive, PROFIBUS DP or ProfiNet option, length of motor and communication cables customizable.
Standard gearmotor	
	Helical-worm geared motor, AC, Efficiency class IE1, IEC or UL-R/CSA, IP55, incl. PTC, RAL7031, C2 coating acc. EN12944.
Food grade gearmotor	
	Helical-worm geared motor, AC, Efficiency class IE3, IEC or UL-R/CSA, IP66, including PTC, corrosion resistant Aluminium housing, sealed surface treatment nsd tupH, complies with FDA.
Variable frequency drive: SINAMICS S120 servomotor controller (included with supply of WW100 based on ordering options)	
	<ul style="list-style-type: none"> 1 ph, 200 ... 240 V or 3 ph, 380 ... 480 V BOP for local control External 24 V DC power supply RS 232 connection port 4 DI, DO PROFIBUS DP, optionally ProfiNet
Shipping weight	
	91 kg (200 lb) ... 181 kg (400 lb) maximum
Approvals	
	<ul style="list-style-type: none"> Declaration of incorporation of partly completed machinery acc. directive 2006/42/EC. Meets FDA 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.

Weighfeeders

SITRANS WW100

Ordering data

Selection and ordering data

Article No.

SITRANS WW100 Weighfeeder	7MH7180-
Accuracy is $\pm 0.25 \dots 0.5 \%$, with capacity up to 25 m ³ /h (880 ft ³ /h).	
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
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

Article No.

SITRANS WW100 Weighfeeder	7MH7180-
Accuracy is $\pm 0.25 \dots 0.5 \%$, with capacity up to 25 m ³ /h (880 ft ³ /h).	
Drive configuration	
SIMOTICS Servomotor incl. SINAMICS control unit with PROFIBUS DP, BOP and power module	
200 ... 240 V 1 ph ²⁾	0 A
380 ... 480 V 3 ph ²⁾	0 B
200 ... 240 V 1 ph, with 5 m (16.4 ft) communication and power cables	1 A
380 ... 480 V 3 ph, with 5 m (16.4 ft) communication and power cables	1 B
200 ... 240 V 1 ph, with 10 m (33 ft) communication and power cables	2 A
380 ... 480 V 3 ph, with 10 m (33 ft) communication and power cables	2 B
200 ... 240 V 1 ph, with 25 m (82 ft) communication and power cables	3 A
380 ... 480 V 3 ph, with 25 m (82 ft) communication and power cables	3 B
200 ... 240 V 1 ph, with 50 m (164 ft) communication and power cables	4 A
380 ... 480 V 3 ph, with 50 m (164 ft) communication and power cables	4 B
200 ... 240 V 1 ph, with 100 m (328 ft) communication and power cables	5 A
380 ... 480 V 3 ph, with 100 m (328 ft) communication and power cables	5 B
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	Article No.
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) ³⁾	Y74	
Enter design units (TPH, MTPH, lb/h, kg/h)	Y71	
Enter design speed (ft/m, m/s)	Y72	
Enter design capacity/rate	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	
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 ³⁾	G11	
Pointek CLS100 Capacitance switch for plugged discharge chute detection	G12	
Belt cleaner, stainless steel, nylon brush, mounted under belt plow, cleaning dirty side of belt	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 177 °C (350 °F). High temp silicone, FDA approved.	G17	
SINAMICS control unit with ProfiNet (only available with drive configuration options 0A ... 5B)	G21	
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 https://www.siemens.com/weighing/documentation		
Spare parts		
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
10 kg (22 lb) nickel plated steel load cell		7MH7725-1EK
15 kg (33.1 lb) nickel plated steel load cell		7MH7725-1EL
20 kg (44 lb) nickel plated steel load cell		7MH7725-1EM
500 PPR optical encoder ⁴⁾		6FX2001-2PA50
1 000 PPR optical encoder ⁴⁾		6FX2001-2PB00
2 500 PPR optical encoder ⁴⁾		6FX2001-2PC50
30 kg (66.2 lb) nickel plated steel load cell		7MH7725-1EN
500 PPR optical encoder		6FX2001-4QA50
1 000 PPR optical encoder		6FX2001-4QB00
2 500 PPR optical encoder		6FX2001-4QC50
Optical encoder connector		6FX2003-0SU12
Speed encoder plug-in with 3 m cable ⁵⁾		7MH7723-1KM
Optical encoder connector with 20 ft (6 m) of cable ⁶⁾		7MH7723-1KD
Speed Encoder, 1 000 PPR, stainless steel		7MH7723-1HH
Speed Encoder, 2 500 PPR, stainless steel		7MH7723-1HJ
Polyurethane sealing, white		7MH7723-1SF
Polyurethane sealing, blue		7MH7723-1SG
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		

Weighfeeders

SITRANS WW100

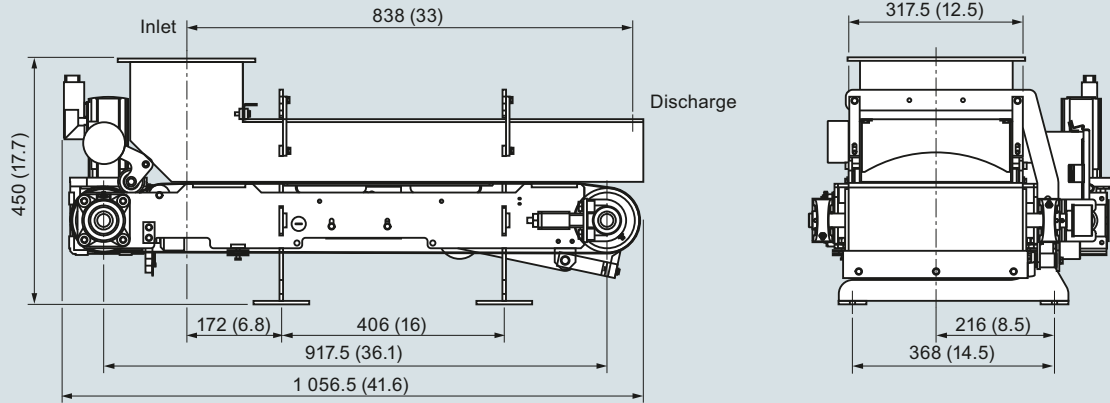
Ordering data

Selection and ordering data	Article No.
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
Skirtboard sealing	7MH7723-1SG
Guide rollers	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
Spare brush, 12 inch belt width	7MH7723-1SN
Accessories	
Start, Stop, Hand/Off/Auto, speed pot local operator station	7MH7723-1JA
CLS100 plugged discharge chute retrofit kit (includes CLS100, material hood)	7MH7723-1JE

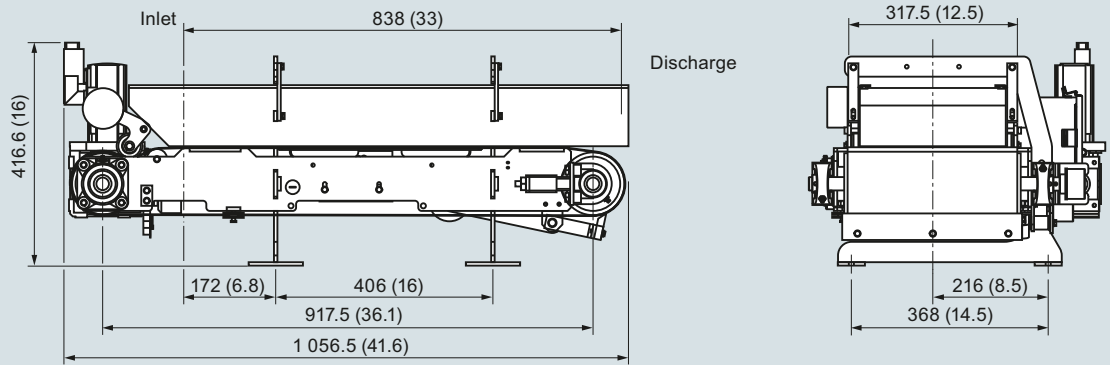
- 1) Available with Frame Construction options 0B ... 0D only.
- 2) Communication and power cables required.
- 3) Available with Material Containment options A ... H only.
- 4) For use with 5 V DC supply from RS 422 circuit card.
- 5) For use with PPR optical encoders: 6FX20012PA50, 6FX20012PB00, 6FX20012PC50.
- 6) For use with PPR optical encoders: 6FX20014QA50, 6FX20014QB00, 6FX20014QC5.
- 7) Available for WW100 weighfeeder, made in Canada prior to 2016; specify Y75 reduction ratio on the order.

Dimensional drawings

Open Construction



Open Horseshoe Inlet



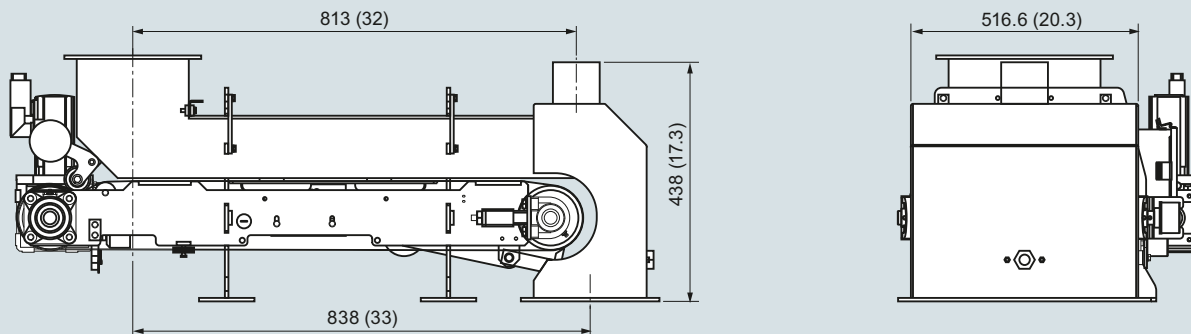
SITRANS WW100, dimensions in mm (inch)

Weighfeeders SITRANS WW100

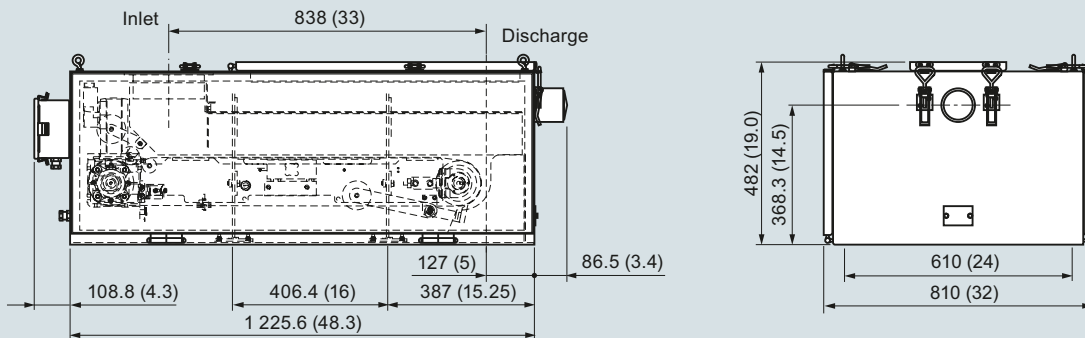
Dimensional drawings and schematics

Dimensional drawings

Open Dust Hood



Enclosed Construction



SITRANS WW100, dimensions in mm (inch)

5

Circuit diagrams

