SINGLE USE SUPPORT.



DATASHEET

RoSS® FILL Flow

Automated filling system for very small volumes

- Filling volume down to 5 mL / container
- Filling accuracy within ±10%
- Up to 60 bags / module

RoSS® FILL Flow

Automated filling system for very small volumes

- Designed for high-precision filling of small volumes
- Recipe-driven and fully automated for consistent filling processes
- GMP-ready and 21 CFR Part 11-compliant for maximum audit readiness
- Annex 1-compliant process integration

PRODUCT INFORMATION

RoSS® FILL Flow is a fully automated, aseptically closed filling system for small single-use bags and bottles with volumes from 5 mL to 50 mL. Its fully disposable fluid path supports a variety of sterile connection and disconnection options. Integrated flow sensor technology enables precise, repeatable volume control even for very small aliquots. Ultrasonic technology minimizes interference from environmental factors such as HVAC ventilation and operator movement.

APPLICATION AREA

RoSS® FILL Flow operates with high precision and allows adjustments in increments of 0.1 mL. It provides precise process control while reducing the challenges of filling very small volumes across laboratory studies, clinical production, and commercial workflows for cell-based applications, including seed train intensification, viral vectors, and other advanced therapies. RoSS® FILL Flow can replace time-consuming manual filling under a laminar flow hood with an automated filling process.

FEATURES & BENEFITS

- Fully automated filling for small single-use bags and bottles
- Flexible setup with the option to attach a second filling module
- Integrated sealing pinch valves for fluid control and aseptic decoupling
- Parallel filling of up to 6 single-use bags
- Recipe-driven, easy-to-use operation
- Bag- and connector-agnostic setup
- GMP-compatible and suitable for cleanroom use
- High-precision drug substance aliquoting into small-volume bags and bottles

Contact our sales team for configure-to-order options

TECHNICAL INFORMATION

CONTROL UNIT

PLC	SIEMENS SIMATIC ET 200SP; CPU 1514SP-2 PN
HMI	SIEMENS SIMATIC MTP1900 Unified Comfort
Pump	6 x Watson Marlow 314D
Sampling scale	n/a
Dimensions	1340 x 1000 x 1444 mm
Weight	250 kg
IP rating	IP 54 (except pressure sensor socket and label printer which are IP 20)
UPS	24 VAC UPS
System power / interface	2 HARTING connectors on Control Unit for connection modules (02)
Provision for filter	n/a

Regional differences	Europe	North America	South America & Asia
Voltage	230 VAC	115 VAC	Depending on region
Frequency	50 Hz	60 Hz	Depending on region
Complied with standards (overview)	Machine Directive 2006/42/EC FDA – 21 CFR Part 11	UL 2011 etc. FDA – 21 CFR Part 11	IEC standards FDA – 21 CFR Part 11

Configurable options

Printer and scanner device	Included	Not included
Visual and acoustic warning device	Included	Not included

FILLING MODULE

Module	FLSV_60_SV_1/4
Dimensions	1645 x 1253 x 2000 mm
Weight	860 kg
Container type	2D single-use bags or bottles
Bags per module	60
Max. filling volume per container	50 mL
Min. filling volume per container	5 mL
Max. weight per container (incl. product)	200 g
Tubing diameter (valve)	1/4“ OD
Valve type	Sealing valve
Parallel filling	Available
Filling speed (estimate)	Up to 40 L/h
Weight measurement technology	Levitronix Flow Sensor (single-use)
Number of flow sensors	6 (only on first module)
Filling accuracy	±10 %
IP rating	IP 54

Max. modules per control unit

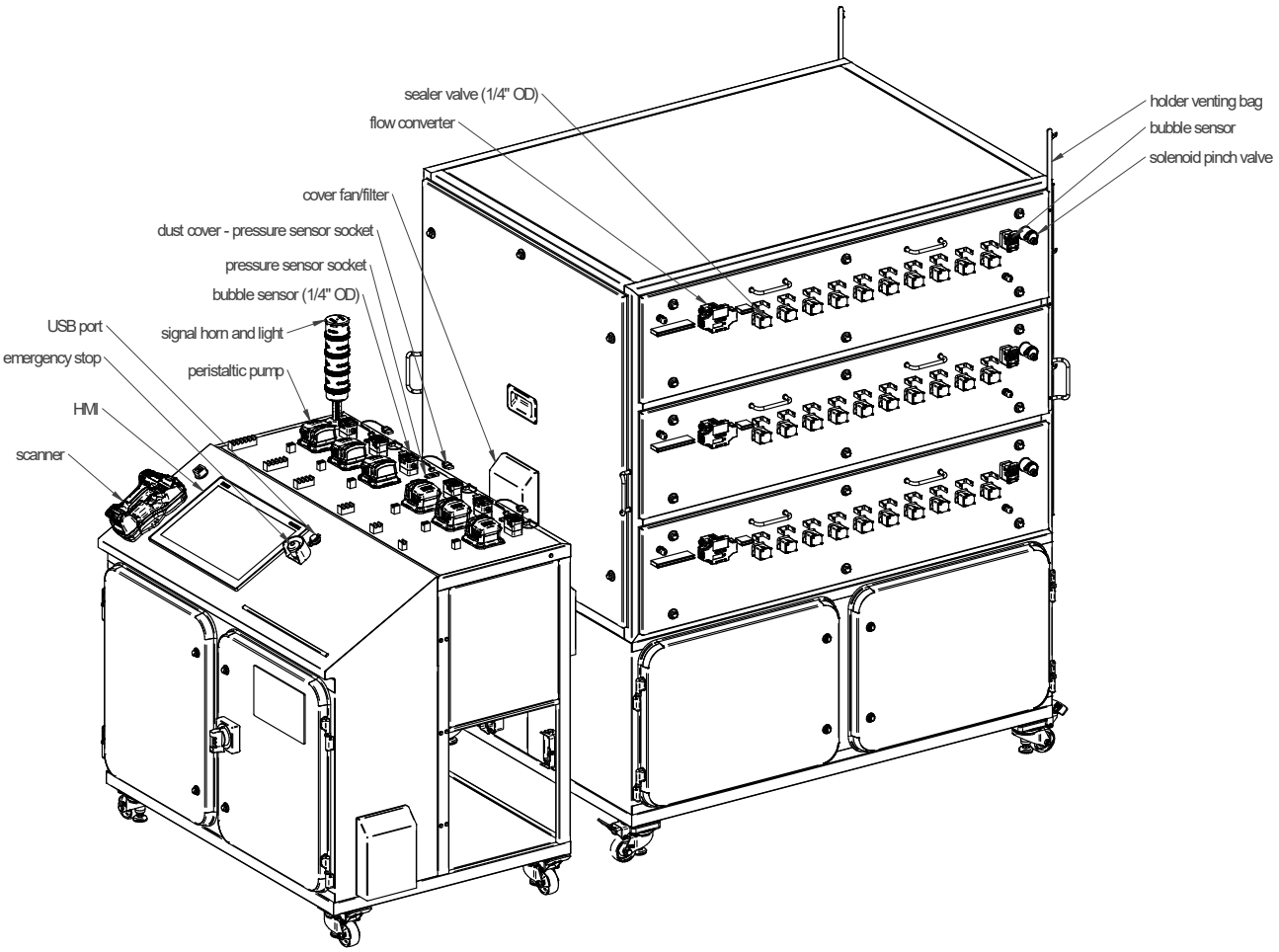
Europe	2
North America	2
South America & Asia	2

SOFTWARE AND ADD-ONS

Scale verification assistant	n/a			
OPC UA integration	Available			
UMC integration	Available			
Smart volume allocation	n/a			
Customized label design	Available if printer and scanner are included			
Customized user groups	Available			
System language	English		English + 1 additional language	
Spare parts package	Available			
Service package	Basic	Silver	Gold	Premium
Extended warranty	Available (1 extra year)			
IOQ support	Available			

TECHNICAL DRAWING

OVERVIEW OF ROSS® FILL FLOW MODULE, FLSV_60_SV_1/4, INCLUDING CONTROL UNIT



RELATED PRODUCTS

CONSUMABLES

IRIS Single-Use Assemblies | Biopharma fluid transfer

Standard and customized single-use assemblies with configurable tubing and aseptic connector options.



RoSS® KSET | Protection for single-use bags

Mechanical protection for small-volume single-use bags in ultra-low-temperature applications.



PLATFORM SYSTEMS

RoSS® PADL | Homogenizing and cooling system

Scalable cooling and kneading platform for optimal homogeneity of liquids.



RoSS® PFTU | Plate-based freezing and thawing platform

Scalable plate-based freeze-thaw unit for single-use bags of up to 50 L.



RoSS® LN2F | Cryogenic controlled rate freezer

Cryogenic controlled rate freezer for single-use bags up to 250 mL and temperatures down to -170 °C.



RoSS® ULTF | Ultra-low temperature storage freezer

Ultra-low temperature storage freezer for frozen drug substances in different sizes and modular interior.



SINGLE USE SUPPORT.

PROTECT EVERY DROP

Advanced solutions for fluid and cold chain management that reduce product loss and improve safety, efficiency, and process flexibility.

Discover our end-to-end solutions

© Single Use Support