

Milli-Q®  
Lab Water

# SDS 500

Storage,  
Protection  
& Distribution  
System



The life science business of Merck KGaA,  
Darmstadt, Germany operates as  
MilliporeSigma in the U.S. and Canada.

**MILLIPORE  
SIGMA**

# YOUR STANDARD TURNKEY SOLUTION

## Integrated, all-in-one solution including:

- A range of main water distribution loop options
- Consumables
- Sanitary sampling valves located anywhere in the loop

## Flexible and adaptable installation

- Distribution designs cover a wide range of installation needs, from a single lab to an entire building

## MilliporeSigma-certified equipment

- Stringent product development, manufacturing and quality systems ensure robust and reliable products



SDS 500 sanitary sampling port

# GIVING YOU CONSTANT WATER QUALITY

## State-of-the-art tank design

- Cylindrical shape and conical bottom for full drainage
- Tri-clamp (TC) connectors ensure perfect, secure closure and a continual flow of water
- No overflow to the drain prevents bacterial contamination

## Protects your pure water quality

- Vent filter protects against airborne contaminants
- Spray ball cleans the tank cover with high pressure
- Optional Automatic Sanitization Module (ASM) with integrated 254 nm UV lamp prevents bacterial and biofilm growth on tank inner surfaces
- Optional Opticap® XLT20 Durapore® 0.22 µm loop filter removes bacteria
- Optional 254 nm UV lamp limits bacterial growth in the loop

## Controlled distribution loop

- Constant velocity in the loop limits bacterial proliferation or biofilm buildup

## Fresh water on demand

- Fresh water may be automatically\* produced and stored over weekends or periods of non-use

\*Programmable in the interface of the Milli-Q® HX or HR 7000 series of systems.



Milli-Q® HX 7000 series system and SDS 500 with Opticap® XLT20 Durapore® 0.22 µm loop filter, UV lamp (loop) and TC connectors.

# Ease of use for your peace of mind

## Preventive maintenance

- Alerts and alarms management provided by the Milli-Q® HX or HR 7000 purification systems
- The communication interface of the Milli-Q® HX or HR 7000 system manages the lifetime of SDS 500 consumables

## Ergonomic design

- Provides easy access to consumables and accessories (vent filters, Opticap® filter, UV lamps)
- Fast, effortless replacement of consumables in just minutes



Lab technician changing SDS 500 vent filters

# Accessible & connected to you

## Easy remote control access to SDS 500 operations via Milli-Q® HX or HR 7000 series systems

- Control via Milli-Q® HX or HR 7000 series display panel or via PC, tablet, or smartphone
- Accurate tank level measures, pressure readings, alerts & alarms, and consumables status

**Real-time data online** facilitates record keeping and data management

**Connectable** to LIMS (Laboratory Information Management System) or BMS (Building Management System) via Milli-Q® HX or HR 7000 series system



Lab technician checking SDS 500 parameters via an authorized iPad connection



# Technical Appendix

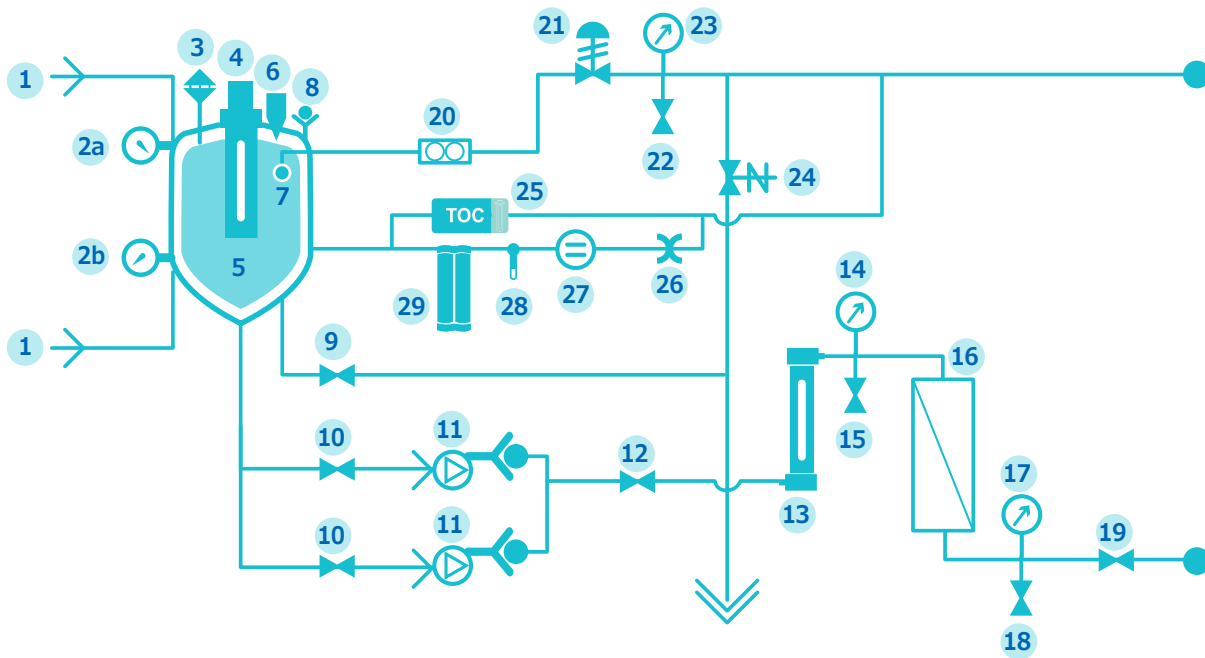


Milli-Q® HX 7000 series system paired with the SDS 500

# SDS 500

## Storage, Protection & Distribution System

### Flow Schematic

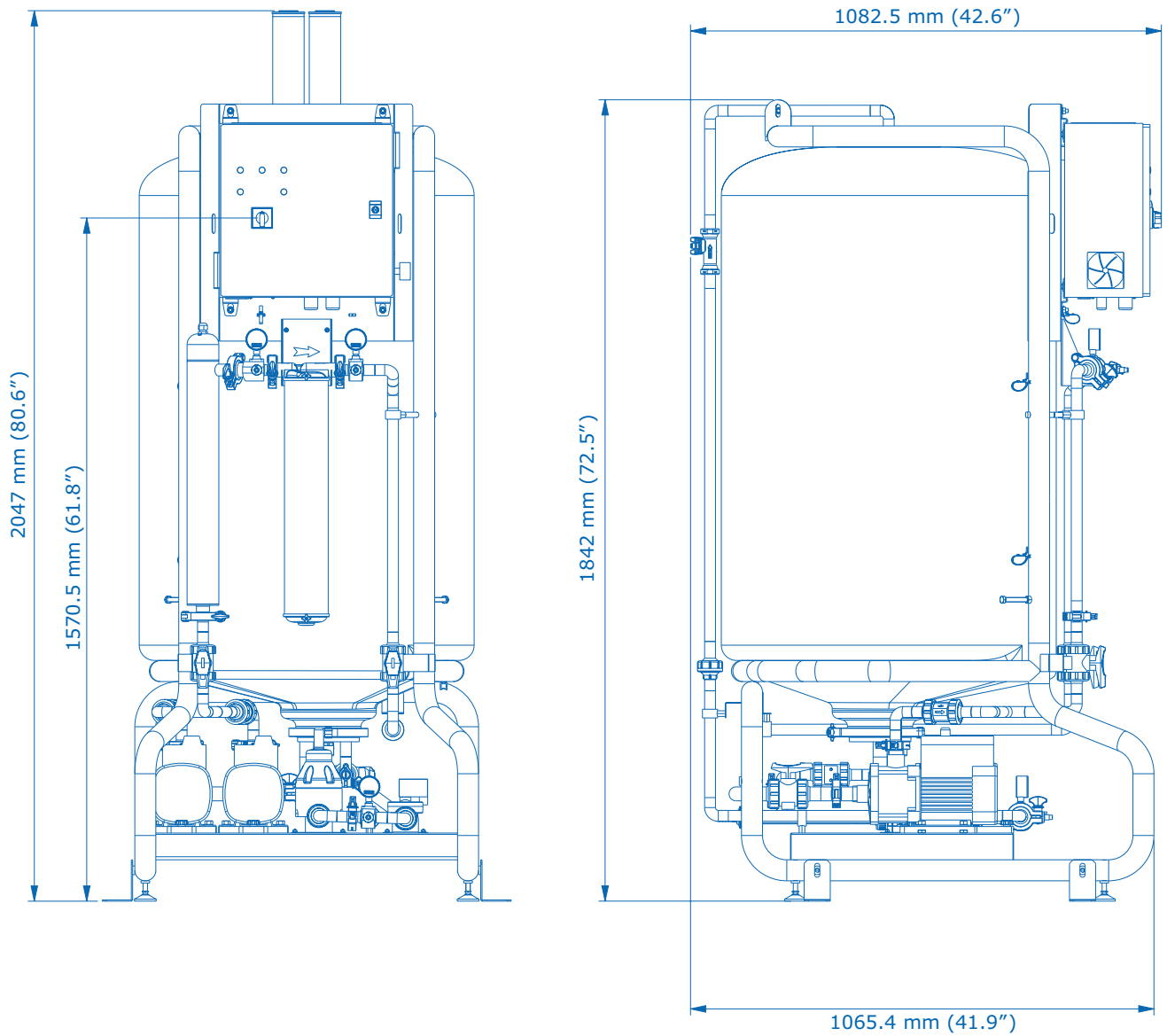


1. Feed from top or bottom
- 2a. Tank level high pressure sensor
- 2b. Tank level low pressure sensor
3. Vent filter
4. Automatic Sanitization Module (ASM) UV (254 nm; option instead of spray ball)
5. Tank
6. Overflow
7. Spray ball
8. Check valve
9. Tank drain valve
10. Pump isolation valve
11. Distribution pump(s)
12. Pump outlet isolating valve
13. UV lamp (254 nm; option)
14. Filter in pressure gauge
15. Opticap® inlet sampling valve
16. Opticap® filter (0.22 µm)
17. Filter out pressure gauge
18. Sampling valve loop out
19. Loop inlet valve
20. Flowmeter
21. Back pressure regulator
22. Sampling valve loop back
23. Pressure gauge
24. Automatic loop rinsing valve
25. TOC monitor (option)
26. 4 LPM flow controller (option with Resistivity booster)
27. Resistivity cell (option)
28. Temperature cell (option)
29. Resistivity booster (option)

# SDS 500

## Storage, Protection & Distribution System

### System Dimensions



## SDS 500 Specifications

|                            |  |
|----------------------------|--|
| Tank volume                | 500 L (132 Gallons)  |
| Usable water volume        | 400 L (105 Gallons), <i>an additional volume of 100 L is reserved for low and high level security</i>    |
| Weight (filled with water) | 660 kg (1455 lb)   |
| Weight (empty)             | Up to 140 kg (308 lb)  |
| Dimensions H x W x D       | 2047 x 790 x 1082 mm (80.6 x 31.1 x 42.6 in)   |
| Floor space required       | 0.85 m <sup>2</sup> (9.15 ft <sup>2</sup> )  |
| Noise level                | E.g. 45.5 dB @ 1m (BPR = 1.5b / flow rate 20 L/min)<br>E.g. 54.7 dB @ 1m (BPR = 4b / flow rate 40 L/min) |

## Pump Performances (Variable speed pumps)

| Voltage / Frequency | Pump Performances               |
|---------------------|---------------------------------|
| 220-240 V, 50/60 Hz | Nominal: 16-40 LPM @ 1-4 bar    |
| 110-127 V, 50/60 Hz | 4-9 GPM @ 14-58 psi             |
| 200 V, 50/60 Hz     | Nominal: 16-40 LPM @ 1-3.5 bar* |
| 100 V, 50/60 Hz     | 4-9 GPM @ 14-50 psi*            |

\* At 90V, performance is reduced to 16-40 LPM @ 1-3 bar (4-9 GPM @ 14-43 psi)

## Electrical Specifications

| Voltage / Frequency | Maximum Power Consumption | Maximum Intensity |
|---------------------|---------------------------|-------------------|
| 220-240 V, 50/60 Hz | 2100 VA                   | < 9A              |
| 100-127 V, 50/60 Hz | 2000 VA (120 V)           | < 16A             |
|                     | 2000 VA (100 V)           | < 20A             |

## Materials

|                        |  |
|------------------------|--|
| Tank                   | Medium density polyethylene (MDPE)                   |
| Frame                  | Epoxy painted passivated steel                       |
| Valves and fittings    | Polypropylene, polyamides, EPDM                      |
| Piping                 | Beta Polypropylene Homopolymer (Beta PP-H)           |
| Pump wetted parts      | 316 SST and tungsten carbide / carbon and EPDM seals |
| BPR wetted parts       | Polypropylene, EPDM, PTFE                            |
| Pressure gauge         | Inox 316 L   |
| Other mechanical parts | Polyethylene terephthalate (PETP)                    |

## Plumbing Connections

|                          |                    |
|--------------------------|--------------------|
| Pure water inlet to tank | 3/4" Sanitary TC   |
| Tank drain               | 1 1/2" Sanitary TC |
| Tank loop inlet/return   | 1 1/2" Sanitary TC |

# Ordering Information

## SDS 500 System

| Item Description                  | Electrical (VAC / Hz) | Catalog Number |
|-----------------------------------|-----------------------|----------------|
| SDS 500 Duplex pump               | 220V-240V 50/60Hz     | TANK5DP500     |
| SDS 500 Single pump               | 220V-240V 50/60Hz     | TANK5SP500     |
| SDS 500 Duplex pump               | 100V-127V 50/60Hz     | TANK6DP500     |
| SDS 500 Single pump               | 100V-127V 50/60Hz     | TANK6SP500     |
| SDS 500 Duplex pump (US & Canada) | 120V - 60Hz           | TANK6DP500C    |
| SDS 500 Single pump (US & Canada) | 120V - 60Hz           | TANK6SP500C    |

## SDS 500 Options, Consumables & Accessories

| Item Description                          | Catalog Number |
|---|----------------|
| Automatic Sanitization Module (ASM)       | TANKSDS2ASM    |
| ASM UV lamp                               | ZLXUVL2L2      |
| Loop UV Lamp Assembly 254 nm              | TANKSDS2UV     |
| UV Lamp 254 nm for SDS 500 Loop           | TANKSDS2UVL1   |
| Vent Filter for type 3 water (2/Pack)     | TANKVNT21      |
| Vent Filter for type 2 water (2/Pack)     | TANKVNT22      |
| Opticap® XLT20 Durapore® 0.22 µm TC/TC    | KVGLA2TTT1     |
| Sanitary Sampling Valve (Stainless Steel) | MXPESP18N      |



For more information on the SDS 500, including options and accessories, please visit our website:  
[emdmillipore.com/labwater](http://emdmillipore.com/labwater)