

# CombiFlash NextGen Site Preparation



## Chromatography Technical Note TN46

### Company:

Shipping Address:	Contact:	Phone:
		Email:

## Overview

This document provides general installation requirements and site preparation for the CombiFlash NextGen system.

### Receiving Consideration for a NextGen

The facility must be able to accept pallet deliveries of a minimum 23 x 31 x 32 in (8.4 x 78.7 x 81.2 cm). (L x W x H)

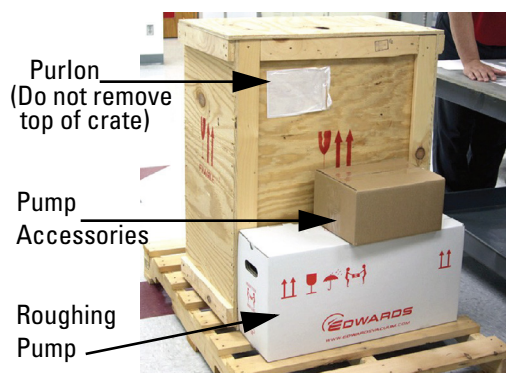


**Figure 1: Packaging of the NextGen**

### Receiving Consideration for a Purlon MS (optional)

The Purlon Mass Spectrometer, roughing pump, and accessories will each be in a separate container together on a single pallet. The Purlon will be shipped in a wooden crate with dimensions of 28.5 x 18 x 35 in (72.4 x 45.7 x 89 cm) (L x W x H)

A power screwdriver is recommended for unpacking the system.



**Figure 2: Packaging for the Purlon**

**Table 1: Physical Dimensions**

CombiFlash NextGen	
H x W x D	66 x 36 x 43 cm (26 x 14.1 x 17 in)
Weight with ELSD	< 33.6 kg (74 lb)
Weight without ELSD	< 27.7 kg (61 lb)
Purlon Mass Spectrometer (if present)	
H x W x D	66 x 37 x 56 cm (26 x 14.5 x 22 in)
Weight	< 35 kg (< 83.7 lb)
Place the Purlon on the left of the NextGen system, with a gap of at least 2 cm between for proper air flow. Isolate the Purlon from any external vibration, such as from the roughing pump.	
Roughing Pump (included with Purlon MS)	
H x W x D	46 x 23 x 46 cm (18 x 9 x 18.1 in)
Weight	< 32 kg (< 70.5 lb)

## Chromatographic Solvents for Installation Qualification

- Solvent systems compatible with the Universal Verification Mix include hexane (or heptane or cyclohexane) and ethyl acetate, or water and acetonitrile (or methanol). Solvent containers must have an opening at least 23.5 mm in diameter (.93").
- Test tubes for rack ordered.
- 20 mL IPA to fill P-trap on ELSD, if installed.
- Secondary containment for solvent and waste containers, if necessary.

## Use and Disclosure of Data

Information contained herein is classified as EAR99 under the U.S. Export Administration Regulations. Export, reexport or diversion contrary to U.S. law is prohibited.

## Additional Supplies if ELSD or Purlon Mass Spectrometer is Included

- Clean gas (such as nitrogen) or air source between 4.2 and 4.8 bar (60-70 psi) if ELSD is included. Source must be within 6m (20 feet) due to tubing length included
- Nitrogen between 4.2 and 10 bar (60-150 psi) if Purlon is included. Nitrogen source must be within 3 m (10 feet) due to tubing length supplied.
- Two adjustable wrenches for nitrogen line hook up.
- Teflon tape.
- Waste container for Spray Chamber drain line (ELSD only).

### Solvents-Purlon

Mass Spec Carrier Solvent

Operating Flow Rate ≤ 0.2 mL/min

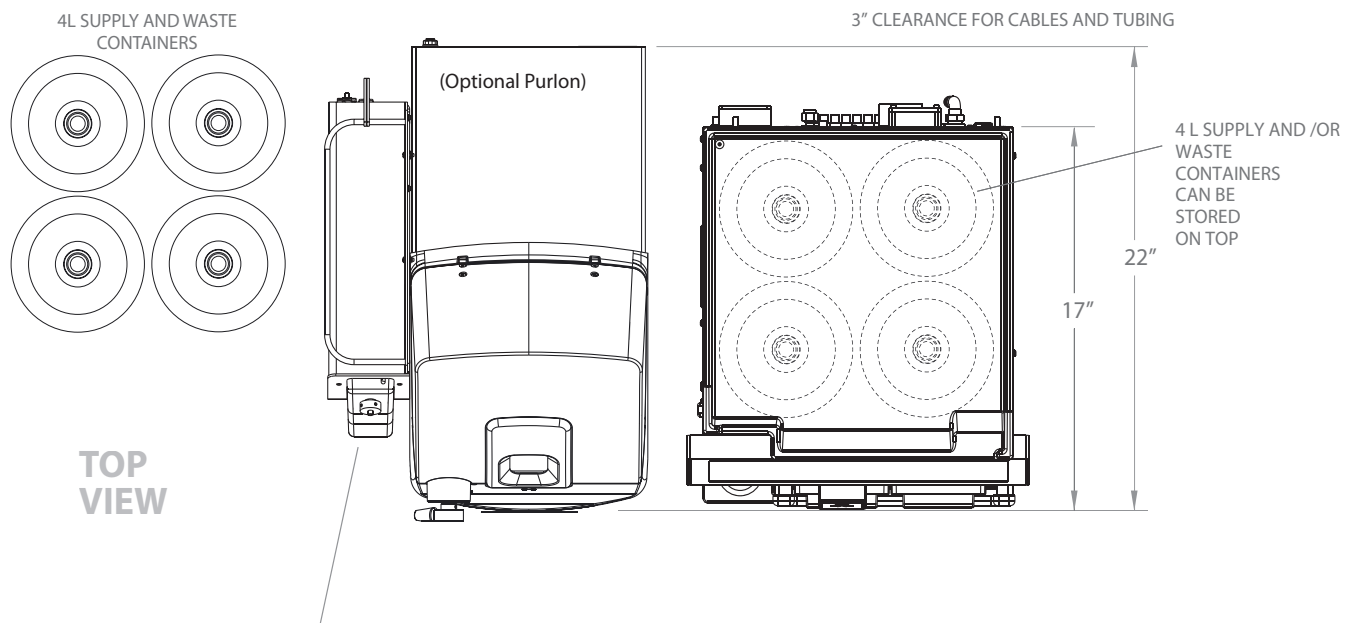
The MS carrier solvent must be miscible with the solvents used by the anticipated separations. Recommended: LCMS-Grade methanol with .1% formic acid. The system includes a bottle cap with GL-45 threads, commonly used on media bottles such as the 500 mL Wheaton #219929. Recommended user-supplied bottle Ø < 3.8 cm.

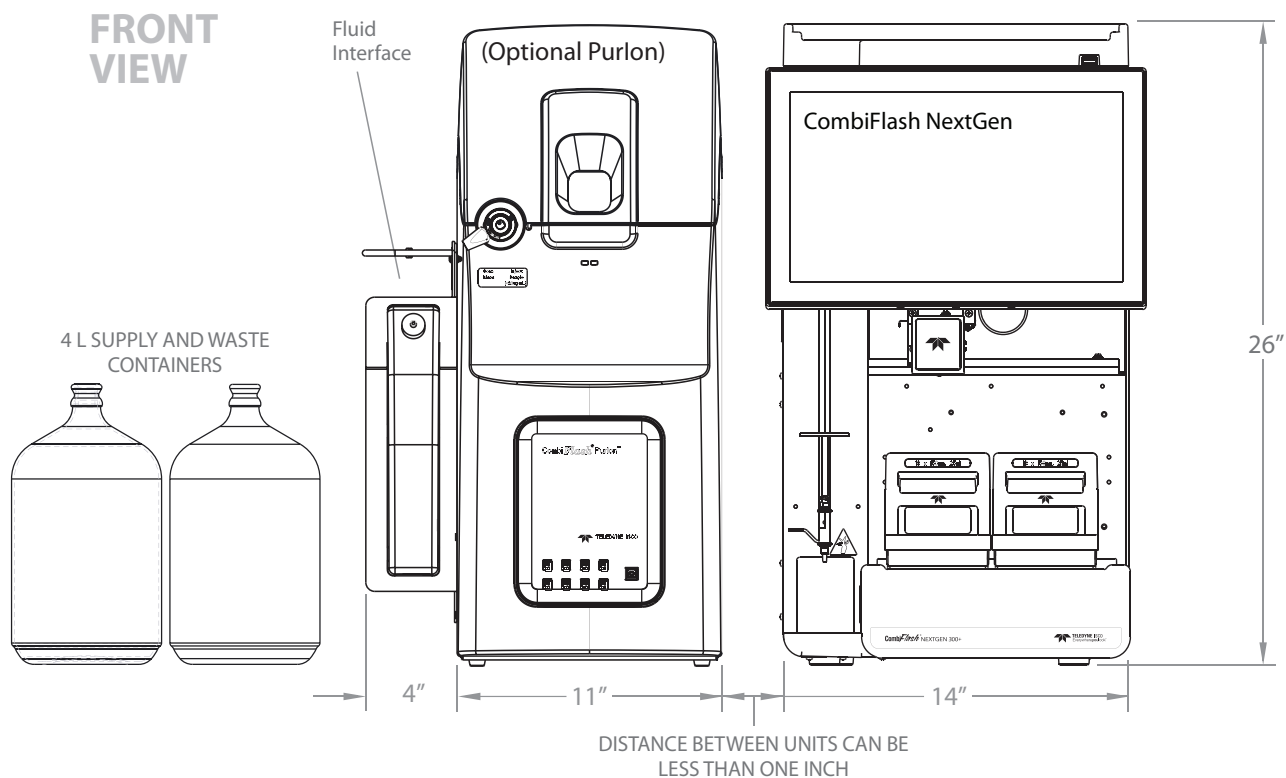
### Space Requirement

Ensure that adequate space is provided for the flash system solvent supply bottles and waste containers.

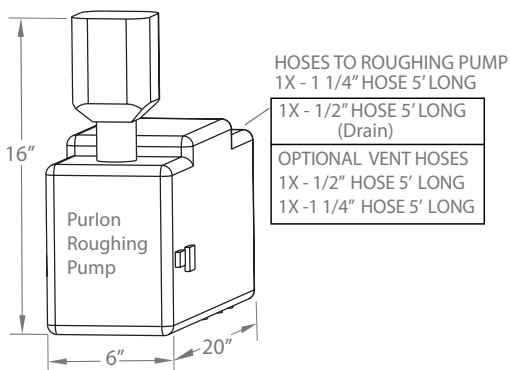
**Table 2: Laboratory Requirements**

Environment	
Temperature	Recommended range: 20–30 °C Maximum range: 15–40 °C
Humidity	< 90%
Always maintain adequate ventilation to control vapors and ELSD exhaust.	
Electrical-NextGen	
Nominal Voltage	100-240 VAC ± 10% (Example: 117 VAC ± 11.7 VAC)
One outlet is required. (NEMA 5-15R) Max power < 300 VA	
Electrical if Purlon Mass Spectrometer Present	
Nominal Voltage	± 10% (Example: 117 VAC ± 11.7 VAC)
Maximum Power	< 1,000 VA
Two outlets are required. (NEMA 5-15R)	
Solvents-NextGen	
Four solvent capable.	
ELSD Gas Requirement—Nitrogen Recommended	
Purity	> 98%
Pressure	60-70 psi (4.2–4.8 bar)
Gas Consumption	< 2.5 L/min
System Connection	0.125" (3 mm) OD, 20' (6 m) semi-rigid tubing
Note: Provisions for connecting this tubing to the nitrogen source are the responsibility of the user. (1/4 MNPT, 1/4 FNPT, and 3/8 MNPT included.)	
Mass Spectrometer Gas Requirement-Purlon	
Purity	Nitrogen ≥ 98%
Pressure	60-120 psi (4.2-8.3 bar)
Mass Spectrometer Gas Requirement-Purlon (Cont.)	
Gas Consumption	< 4 L/min, typical.
System Connection	.25" (6 mm) OD 10' (3 m) semi-rigid tubing provided.
NOTE: Provisions for connecting this tubing to the nitrogen source are the responsibility of the user. (1/4 MNPT, 1/4 FNPT, and 3/8 MNPT), included.	

**Figure 3: Top View**



OPTIONAL PURION ROUGHING PUMP DIMENSIONS



**Figure 4: Front View**

**Teledyne ISCO**

P.O. Box 82531, Lincoln, Nebraska, 68501 USA

Toll-free: (800) 775-2965 • Phone: (402) 464-0231 • Fax: (402) 465-3001

E-mail: [IscoService@teledyne.com](mailto:IscoService@teledyne.com)

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**Table 3: Installation Qualification Checklist**

Step	Description	Installer Initials	Operator Initials
1	Unpacking the unit		
2	Position the system		
3	Connect and route drain lines		
4	External ELSD gas (optional)		
5	External Purlon gas (optional)		
6	Connect power		
7	Turn on power		
8	Prime the solvent lines		
9	Installation of the collection tube racks		
10	Configure the system		
11	System verification		
<b>Certification of Installation Qualification Completion</b>			
	Installer Name (print):		
	Installer Signature:		
	Date:		
	Operator Name (print):		
	Operator Signature:		
	Date:		
<b>Serial Number(s)</b>			
<b>Customer Information</b>			
Company Name:			
Company Address:			
Lab Number:			

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