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Utility Locations 1 & 2

Atellica System Power (2 Locations)
- 3- Total 208VAC per location
- 1- Total 120VAC per location

Atellica System Power With Eaton 9PX-3000 GL RT UPS

Atellica Sampler Handler Power
- 1- 200-240VAC 60hz 1-Phase
- 20 Amp Dedicated / Non Isolated Circuit
- Receptacle NEMA L6-20R

Accessory Power
- 1- 120 VAC 60 Hz 1-phase
- 20 Amp Circuit
- Receptacle Nema #5-20R

Atellica Chemistry Analyzer Power
- 1- 200-240VAC 60hz 1-Phase
- 20 Amp Dedicated / Non Isolated Circuit
- Receptacle NEMA L6-20R

Atellica Immunoassy Analyzer Power
- 1- 200-240VAC 60hz 1-Phase
- 20 Amp Dedicated / Non Isolated Circuit
- Receptacle NEMA L6-20R

DI Water in this location
- Reagent Grade DI Water (CLSI C3-A4) required. Regulated to 5-30PSI with two shutoff valves, and two $\frac{3}{8}$" compression fittings to supply the analytical modules.

Data
- 1 Laboratory Network Connection Required

Utility Location 3

Work Station Power:
- 3 Circuits 120VAC 20Amp Duplex Receptacles NEMA #5-20R

Data
- 3 - Total 3 Laboratory Network Connections
- 6- Total Cat 5 / 6 Point-to-Point connections to utility location 6.

Utility Location 4

Aptio System Power From UPS, Transformer, and Cut-off Switch

Utility Location 5

Compressed Air From provided Air Compressor

$\frac{3}{4}$ Tubing Run From Source

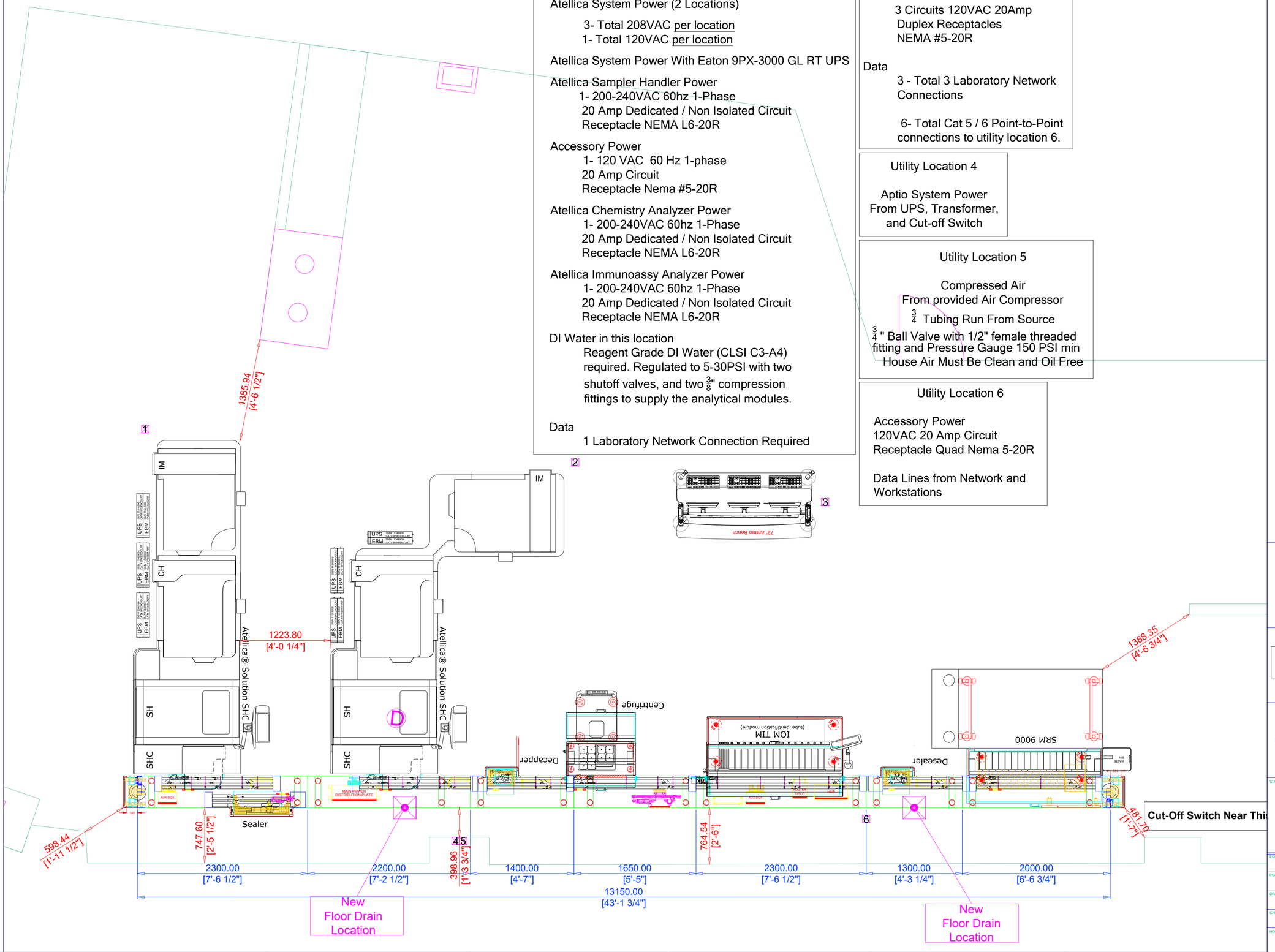
$\frac{3}{4}$" Ball Valve with 1/2" female threaded fitting and Pressure Gauge 150 PSI min

House Air Must Be Clean and Oil Free

Utility Location 6

Accessory Power
120VAC 20 Amp Circuit
Receptacle Quad Nema 5-20R

Data Lines from Network and Workstations



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St. Luke's Hospital- East
100 NE St. Lukes Blvd.
Lee's Summit, MO
64086

EQUIPMENT:	Aptio Automation
PGR:	1 of 5
DRAWN BY:	CMH
SCALE:	1:35
CHK'D BY:	
DATE:	09/19/2019
HOSPITAL #	
PROJECT #	
DRAWING/SKETCH #	
REVISION #	

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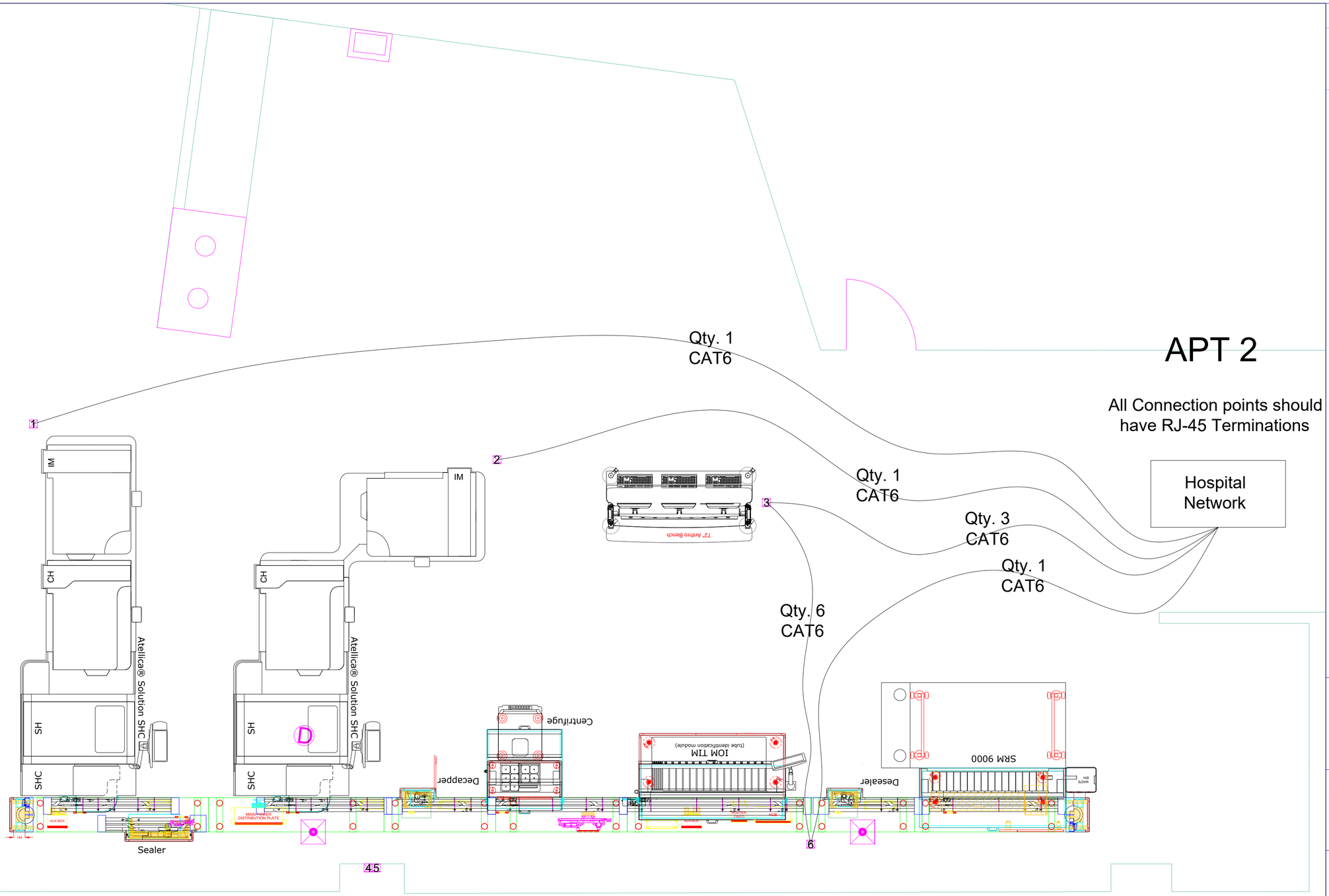

APT 2

All Connection points should have RJ-45 Terminations

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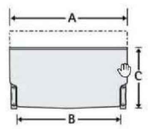
System Utilities

Category	Title	Requirement	Qty	Utility Location	Comments
Power	SF4 Compressor Main Power	208/230 VAC 60 Hz, 3-phase dedicated circuit, 30 Amp circuit with 25/25 amp fast acting fuse in the cutoff switch. Respectably	1	TBD	AWG 10 Wire Dedicated Circuit Emergency Power
Power	Aptio UPS Main Power (1-phase 12kVa)	4-wire 208 VAC 60Hz with neutral, Single Phase, 100 AMP 2 AWG	1	TBD	Dedicated Circuit Emergency Power Neutral wire required.
Power	Power connections from UPS to Track	1-P (3-wire, L1, L2, G) See block diagram page	1	4	Connections include transformer, Shut Off Switch inside Lab, and Aptio Track
Power	Command Center Power	120VAC 1-phase 20A, Duplex NEMA #5-20R	3	3	Dedicated Circuit Emergency Power
Power	Aptio Auxiliary power	120VAC 1-phase 20A, Duplex NEMA #5-20R	1	6	Dedicated Circuit Emergency Power
Power	Atellica Sample Handler	208VAC 1-phase 20A Long Delay Breaker, HBL5461 or or equivalent NEMA 6-20R	2	1 & 2	Refer to Atellica Site Survey for more detail
Power	Atellcia Auxiliary power	120VAC 1-phase 20A, Duplex NEMA #5-20R	2	1 & 2	Refer to Atellica Site Survey for more detail
Power	Atellica Chemistry Analyzer	208VAC 1-phase 20A Long Delay Breaker, HBL5461 or or equivalent NEMA 6-20R	2	1 & 2	Refer to Atellica Site Survey for more detail
Power	Atellica Immunoassy Analyzer	208VAC 1-phase 20A Long Delay Breaker, HBL5461 or or equivalent NEMA 6-20R	2	1 & 2	Refer to Atellica Site Survey for more detail
Data	Command Center Data	RJ-45 Connections to Laboratory Network	3	3	Includes connection for Hospital LIS Computer
Data	Command Center Point-to-Point	RJ-45 Connections from Command Center to Aptio Track	6	3 & 6	Connections from Command Center to Aptio Track
Water	Atellica Chemistry Analyzer	Reagent Grade Water (CLSI C3-A4) required in this location regulated to 5-30 psi with shutoff valves, and 3/8" compression fittings to supply the analytical modules.	2	1 & 2	Refer to Atellica Site Survey for more detail
Water	Atellica Immunoassy Analyzer	Reagent Grade Water (CLSI C3-A4) required in this location regulated to 5-30 psi with shutoff valves, and 3/8" compression fittings to supply the analytical modules.	2	1 & 2	Refer to Atellica Site Survey for more detail
Air	Copper tubing routed from the Compressor to the Aptio track	Air Supply Line copper tubing run with 3/4 inch female threaded fitting at end near the track.	1	5	3/4 inch copper tubing routed from the Compressor to the Aptio track.
Air	Supply Shutoff valve, air gauge 150 PSI min, T-fitting, NPT 3/4 inch female fitting, and drain valve.		1	5	Located in the LAB next to the Aptio Automation. Refer to pole location.

Unrestricted



A = 6' B= 5' 10" C= 3'

Aptio Automation Environmental Impact

INPECO Technical Specifications Vers. 1.38 LDAT-000.835.02.01.02(002)

		Metric Units		Standard Units
Weight of Aptio modules	2640	Kg	5820	Lbs
Weight of separate analyzer	3296	Kg	7266	Lbs
Aptio Compressed air (NL/min)	211	NL/min		
Total power consumption of modules through internal busway (VA)	8	KVA		
Total power consumption (VA) of separate analyzers*	12	VA		
Heat of modules with analyzers (BTU/h)	53738	BTU/h		
Waste drain capacity	110.0	L/h	29.1	G/h
DI water require-ments	78.0	L/h	20.6	G/h

The calculations here are based on the site surveys for the equipment shown at publication and are subject to change.

** Analyzers are not included in the total busway calculation. Power is nominal and does not include Inrush Current.

Floor Loading Capacity Requirements:

Unless otherwise noted, all floor loading capacity requirements are for less than 300 Kg/square meter.

Environmental:

Temperature: from 5°C to 40°C.
Humidity: Max: 80% at 31°C to 50% at 40°C.

Compressed Air:

Supplied air pressure range: 7 bar – 9 bar.
Air quality: Output air quality for all family members will meet ISO8573-1:2010 [1:4:1] (clean, oil-free, and dry compressed air).

- ISO 8573 states:
- Less than 20,000 particles per cubic meter for particle sizes between 0.1 micrometer and 0.5 micrometer
- Less than 400 particles per cubic meter for particle sizes between 0.5 micrometer and 1.0 micrometer
- Less than 10 particles per cubic meter for particle sizes between 1.0 micrometer and 5.0 micrometer
- Pressure dewpoint less than or equal to +3 °C
- Total oil less than or equal to 0.01 milligrams per cubic meter

Total compressed air is adjusted by a factor of 1.5.
Reference conditions for Normal Liters per minute (NL/min) in this spreadsheet:
20 degrees C temperature and 1 bar pressure (per ISO 1217).

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Aptio Main Power

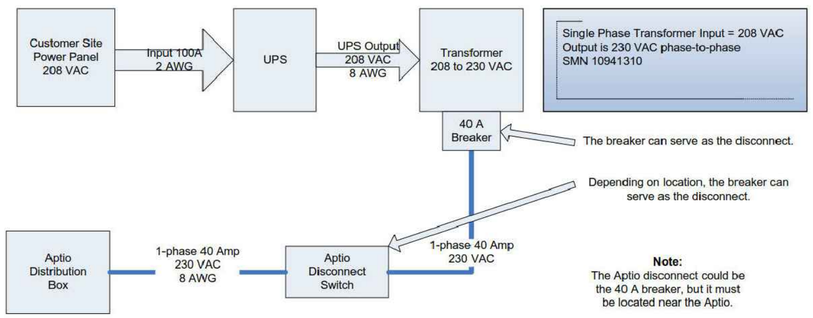
40 Amp breaker or

40 Amp Disconnect Switch

Eaton 9155 UPS

Step-Up Transformer

Eaton 9155 series
Single-Phase UPS
(power consumption >3kVA to <10kVA)
Block Diagram for North America
DCAU-F00.811.03.03.02



Internal circuit breakers should not be used for customer main disconnect.

NOTES
All connections are hardwired.
Installation must conform to local electrical codes.
Loads should be considered non-linear.

UPS wiring must be copper rated at 600 VAC, 75° C
UPS wiring recommendations are extracted from the Eaton User Manuals referenced below.

All voltages are listed as nominal voltages.
Allowable fluctuations = +/- 10%

Refer to the Aptio Environmental Spreadsheet (DCAU-F00.811.02, Compressor and UPS Sizing tab) for UPS sizing and associated SMNs.

Refer also to the latest version of the Eaton User Manual:
http://powerquality.eaton.com/Products-services/Backup-Power-UPS/9155.aspx#documentationtab

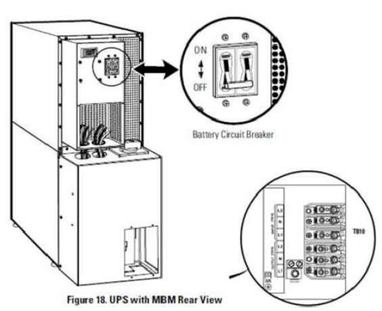


Figure 18. UPS with MBM Rear View

Aptio™ Automation is a trademark of Siemens Healthcare Diagnostics.

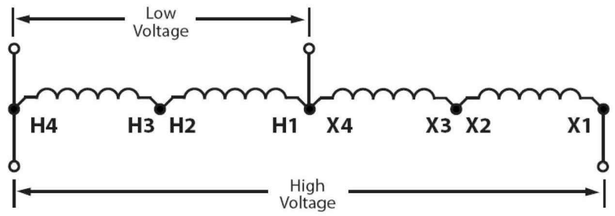
Eaton 9155 1-phase 12 kVA UPS and 1-Phase Transformer		
9155 UPS Weight and Dimensions	**9155 UPS Electrical Requirements**	**1-Phase Transformer**
Weight: 171 (kg) 377 (lbs)	4-wire 1-phase dedicated circuit direct wired to: • 12 kVA UPS (neutral required at the UPS) • step-up transformer • Electrical disconnect switch or 40 Amp breaker • Aptio power plate	**Weight:** 17 (kg) 38 (lbs)
Dimensions: (H x W x D) 32" x 12" x 33"	**Voltage:** 208VAC 60Hz	**Dimensions:** (H x W x D) 13.5" x 5.5" x 5.13"
	Current: 100 Amp Circuit	**Heat Output:** 812 BTU's at full capacity
Heat Output: 4,512 BTU/Hr	Hard Wired 2 AWG.	

THE POWER PLACE Inc.®

Power Protection & Power Quality Specialists

Primary configuration: 1 winding – 4 sections
Single winding where the voltage delta is dependent on where the HV & LV conductors are connected

Wiring Diagram – 208VAC Input (Wiring Instructions to be provided with transformer when shipped):



Wiring Instructions:

1. Connect H4 together with one of your input wires (lower voltage) and one of your output wires (higher voltage). You should have a total of 3 wires combined together for this one connection.
2. Connect H2 and H3 together. You should have a total of 2 wires combined together for this one connection.
3. Connect your second input wire (lower voltage) to H1 and X4. You should have a total of 3 wires combined together for this one connection.
4. Connect X2 and X3 together. You should have a total of 2 wires combined together for this one connection.
5. Connect your second output wire (higher voltage) together with X1. You should have a total of 2 wires combined together for this one connection.
6. Re-verify wires in previous steps. Check that all connections are tight and well insulated.
7. Prior to powering the Siemens Aptio, apply power to the transformer and verify that you have the proper voltage (229VAC) for the Siemens Aptio.

Secondary configuration: 220VAC Input – see below

Winding material: Copper

Temperature rise: 115° C

Electrostatically shielded: No

Rev 1 – 01/16/14

1590 North Roberts Road - Suite 104
Kennesaw, Georgia 30144
(770) 499-0900 – Phone
(770) 499-9493 – Fax
www.power-place.com – Website

Distributors of:
- **UPS Systems**
- **Power Line Monitor Services**
- **Surge Protectors**
- **Power Conditioners**
- **Generator Systems**

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SIEMENS Healthineers

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CUSTOMER:

EQUIPMENT: Eaton 9155 12 kVa UPS

PG#: Page 4

DRAWN BY: KM | SCALE:

CHK'D BY: BT | DATE: 05/02/2019

HOSPITAL # | PROJECT #

DRAWING/SKETCH # | REVISION #

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Scale
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NOTE: All construction room upgrades (such as: new walls, doors, windows, millwork, plumbing, furniture, medical equip, and etc.) are shown for proposal purposes only. The customer is to provide these room upgrades. In the case of a turnkey, these room upgrades will be detailed in the contractor's quote. The contractor's quote takes precedence over the room layout drawings.

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NOTE: Additional accessories that typically accompany the system will require storage space.

NOTE: All drains will need to be confirmed as meeting the requirement for drain flow and capacity as determined in the Siemens specifications by the customer.

NOTE: Customer water supply must meet Siemens specifications prior to instrument installation for both water specific requirements as well as meeting instrument demand specifications.

Responsibilities:

The Customer is responsible for site preparation for the installation of the Automation system and accessory UPS, Transformer, and Compressor, provided by Siemens.

The customer also installs the UPS Transformer, and Compressor, along with all wiring breakers panels and switches for these accessory items following local code and state regulations.

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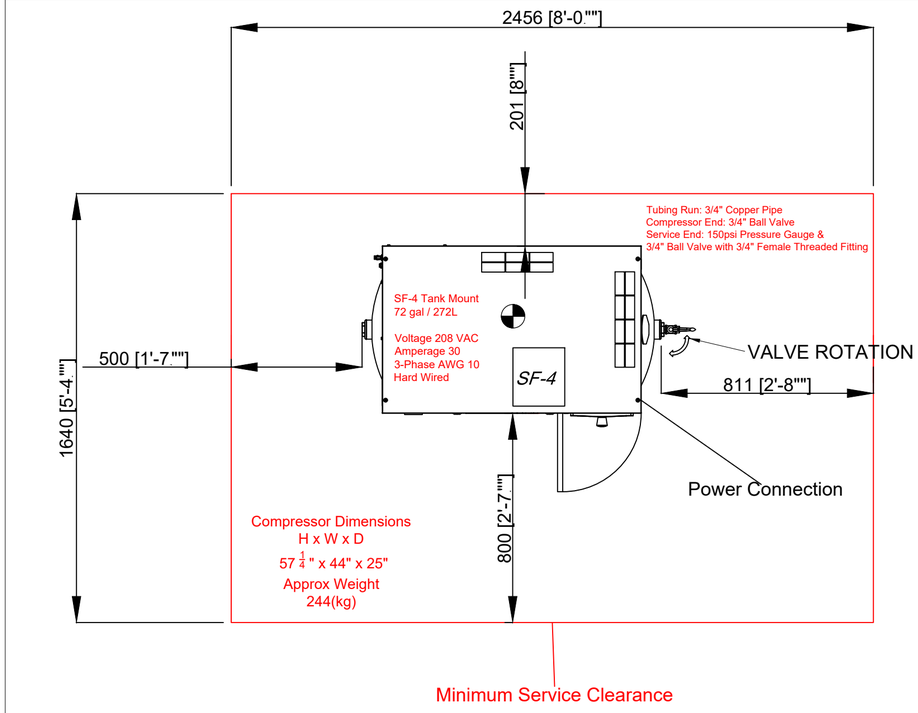
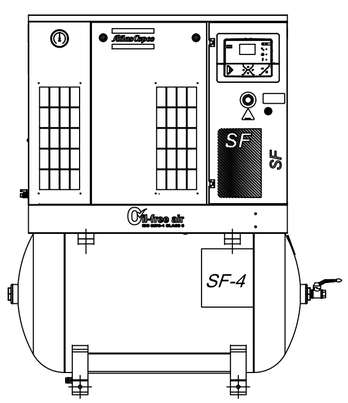
The Customer also provides for the installation of Cat 5 Data lines in the locations called out in the IT diagram.

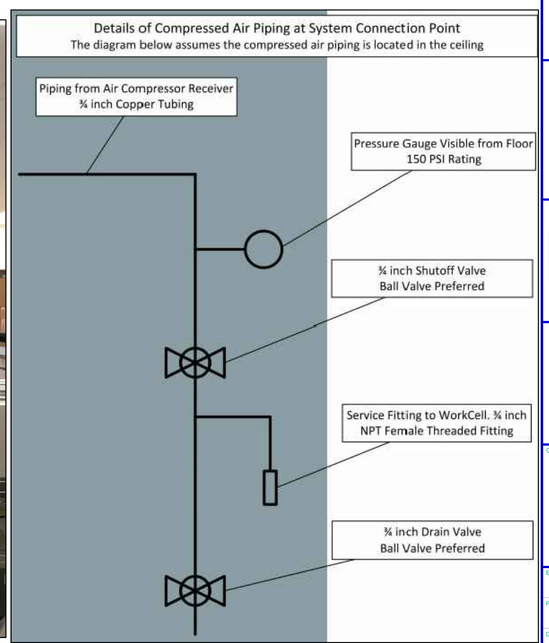
NOTE: Contractor or Siemens to site verify locations of all existing walls. The locations of existing walls may be different than as shown in this layout proposal.

Atlas Copco SF4 Compressor

Compressor Weight and Dimensions	Room Environment Operating	Electrical Requirements	Plumbing Requirements
Weight: 244 (kg) 538 (lbs)	For indoor use only. Room temperature 65-85 F. **Adequate Room Ventilation Required**	1-Dedicated three phase circuit	Tubing $\frac{3}{4}$" copper tubing run from the compressor to the Aptio Automation location.
Dimensions: (H x W x D) 57 $\frac{1}{4}$", 44", 25"	**Noise Level:** 58 dB (A) at 1m	**Voltage:** 208/230VAC 60Hz +/- 10%	Required accessories & fittings for air supply line.
	Max Pressure: 145 psi @ 10 bar	Cutoff switch with fast acting 25/25 Amp fuses.	**Compressor End:** $\frac{3}{4}$" Shutoff Valve with $\frac{3}{4}$" Female Threaded Fitting.
	Capacity: 12.5 CFM (354 NL)	**Current:** 30 Amp Circuit.	**Aptio End:** Pressure Gauge (150psi), $\frac{1}{2}$" Female Threaded Fitting.
Nominal Motor Power: 5 HP	**Thermal Output:** 12000 BTU/hr Continuous	AWG 10 Hard Wired	**Drain:** Necessary at the Compressor End for Condensation.







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SIEMENS Healthineers

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CUSTOMER:

EQUIPMENT: Atlas Copco SF 4 Compressor

PG#: Page 5

DRAWN BY: KM | SCALE:

CHK'D BY: GM | DATE: 03/31/2020

HOSPITAL # | PROJECT #

DRAWING/SKETCH # | REVISION #

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The Customer is responsible for the installation of the quantity and required power water and air in designated locations.
Power poles are typical but not a specific requirement.
The Customer also provides for the installation of Cat 5 Data lines in the locations called out in the IT diagram.

Electricians are responsible for following all State and local building codes and National Electrical codes

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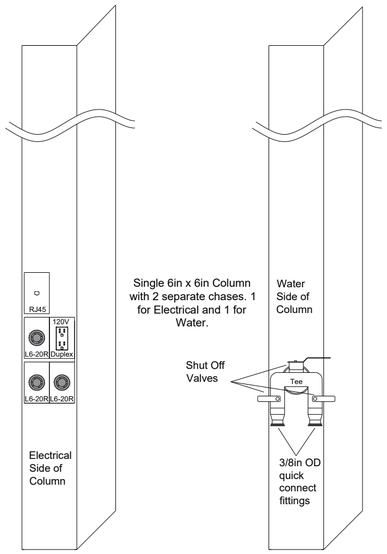
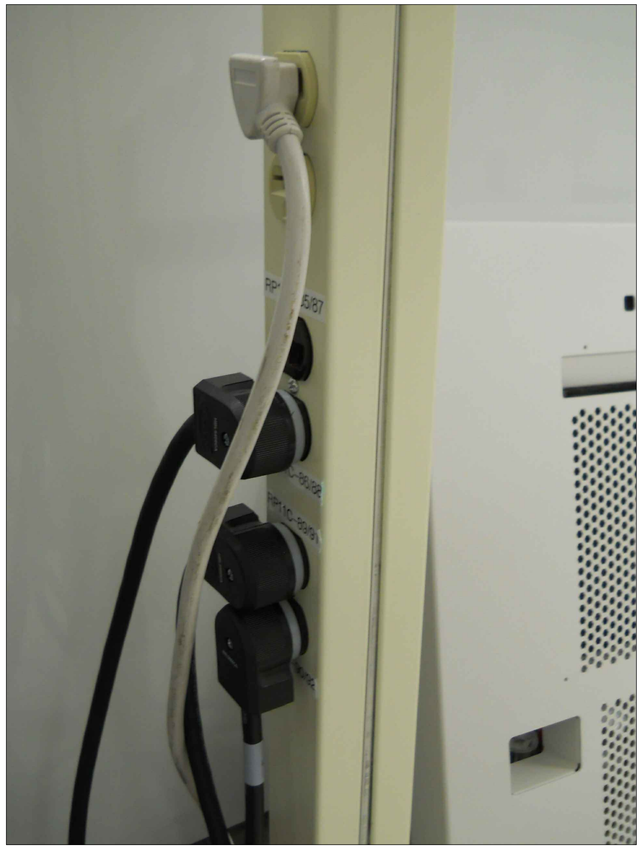
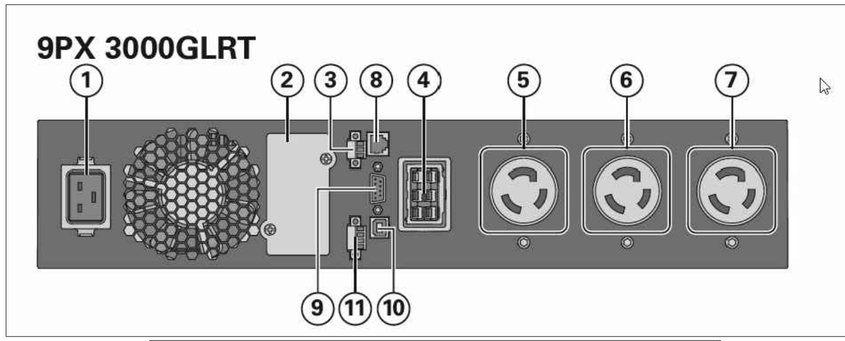






1. Socket for connection to AC power source
2. Slot for optional communication card
3. Relay output contact
4. Connector for additional battery module
5. Primary group: outlets for connection of critical equipment
6. Group 1: programmable outlets for connection of equipment
7. Group 2: programmable outlets for connection of equipment
8. Connector for automatic recognition of an additional battery module
9. RS232 communication port
10. USB communication port
11. Connector for ROO (Remote On/Off) control and RPO (Remote Power Off)

ATELLICA POWER PLUG
EACH MODULE HAS A
NEMA 6-20P PLUG
STRAIGHT BLADE 20 AMP

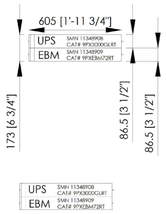
EATON UPS
UPS WITH A NEMA 6-20R AND BATTERY BACKUP
9PX3000GLRT / 9PXEBM72RT

CUSTOMER TO INSTALL WALL PLUG
20 AMP NEMA L620R
TURNLOCK SINGLE RECEPTACLE

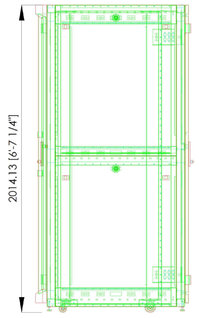
Rack Views

UPS/Battery Pair - 1 set per Instrument

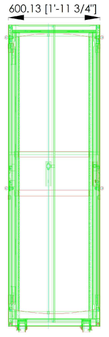
H-3.5"
W-1' 5 1/4"
D-1' 11 3/4"



Side View - Height



Front View - Width



Top View - Depth

No	REVISIONS	CHK'D

SUBMITTED FOR:
- [ ] Approval
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CUSTOMER:

EQUIPMENT:	Atellica Information
PG#:	Page 6
DRAWN BY:	CMH
SCALE:	
CHK'D BY:	
DATE:	09/19/2019
HOSPITAL #	
PROJECT #	
DRAWING/SKETCH #	
REVISION #	

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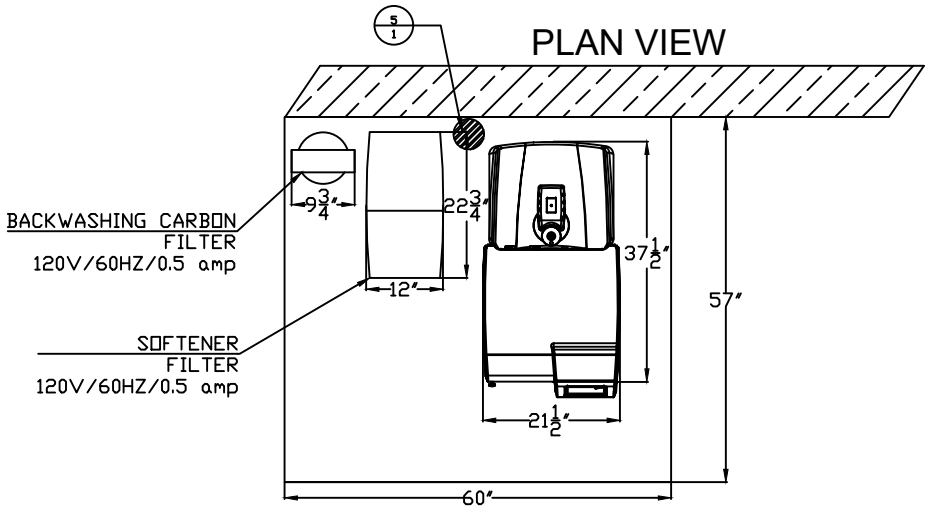
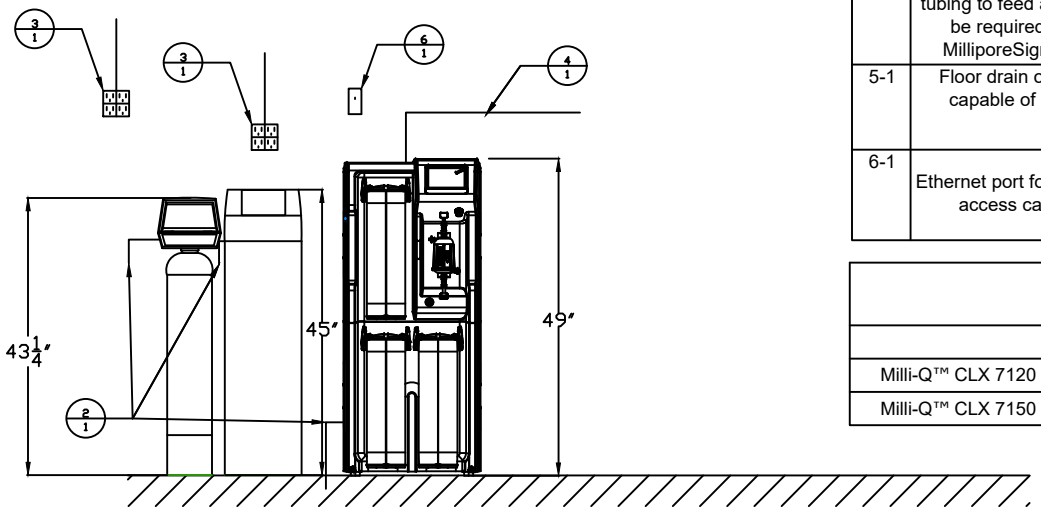
NA CUSTOM WATER SYSTEMS - MILLI-Q	
EQUIPMENT LOCATIONS AND UTILITIES	[ ] APPROVED [ ] REVISE AS MARKED AND RESUBMIT

SIGN: _____ COMPANY _____ DATE _____

REVISIONS				
REV	BY	DESCRIPTION	DATE	APPD
1				



ACCESS AREA REQUIRED



ELEVATION VIEW

INTERFACE CALL-OUT TABLE			
TAG	DESCRIPTION	LOCATION	In Place
1-1	Feed water source - provide 3/4" npt male connection with isolation ball valve. 30 LPM at 50 - 85 psi. Temperature blending valve recommended if feed water temperature is expected to drop below 10°C (50 °F, max 95°F). Blending valve and valve installation by others.	On wall, within 5 feet of system. If under a sink, provide 2" Ø hole in counter or casework for tubing for connection to system by MilliporeSigma	☐ YES ☐ NO
2-1	Reject from make-up system and pre-treatment	MilliporeSigma will run tubing from system to floor drain or 2" standpipe provided by customer. Standpipe max height 24 inches	☐ YES ☐ NO
3-1	120VAC for water system, provide (2) 5-15R quad receptacle. Make-up system power 1,100 VA.	Locate as shown. Must be within 36" of the make-up system	☐ YES ☐ NO
4-1	Distribution recirculating loop - MilliporeSigma will provide & install MAX 60 feet of 16 mm OD (10 mm ID) flexible tubing to feed analyzer(s). Conduit may be required (by others) following MilliporeSigma conduit guidelines.	Surface mounted in accessible location, conduit required if loop runs in ceiling or under the floor. Conduit required and in place?	☐ YES ☐ NO
5-1	Floor drain or stand pipe by others, capable of handling 30LPM flow.	MilliporeSigma will run tubing from system to floor drain or 2" standpipe provided by customer. Standpipe max height: 24 inches	☐ YES ☐ NO
6-1	Ethernet port for each system for remote access capabilities (by others)	Approx. location shown on drawing.	☐ YES ☐ NO

Weight

	Dry Weight	Shipping Weight	Operating Weight
Milli-Q™ CLX 7120	127 kg (280 lb)	155 kg (341.7 lb)	303 kg (668 lb)
Milli-Q™ CLX 7150	139 kg (306.4 lb)	143 kg (368.2 lb)	318 kg (701.1 lb)

NA CUSTOM WATER SYSTEMS - MILLI-Q
400 Summit Drive - Burlington MA, 01803

CLIENT: Milli-Q™ CLX 7120 / 7150

TITLE: Plan & Elevation View

DRN BY	DATE	CHK / APPD BY	DATE	CONF. LEVEL	SIZE	DWG NO	REV
xxx	xx/xx/xx	xxx	xx/xx/xx	1	A		-

RELEASE DATE | SCALE | LOCATION CP | STATUS F | SHEET 1 OF 1

SIEMENS Healthineers

Atellica Solution

General Report
All Configurations

Site Survey

Customer:	
Address:	
Department:	
Room:	
Contact Person:	
Telephone:	
Cust. specific no.:	
Cust. no.:	
Date:	

Document Version

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Please contact your local Siemens Healthineers office to order a current version or refer to our website http://www.siemens-healthineers.com.

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Copyright

1.1 Materials

- Tape measure
- String and tape
- Laser level (if available)

2.1 Site Survey Customer Information

2.1.1 Institution

Address:			
City:		State/Province:	
Country:		Postal/Zone Code:	

2.1.2 Client Laboratory Contact

Name:			
Telephone:			
Date Reviewed Preliminary Report:			
Signature:			
Date Reviewed Final Report:			
Signature:			

2.1.3 Preliminary Visit

Date:	
Signature:	
Is Site Ready For Installation?	☐ Yes ☐ No

2.1.4 Final Visit

Date:	
Signature:	
Is Site Ready For Installation?	☐ Yes ☐ No

2.1.5 Site Surveyor

Name:	
Telephone:	

2.1.6 Service Manager or Designee

Signature:	
Siemens Support Personnel	
Name	**Contact Information**

3.1 Delivery Information

The information provided here is for planning delivery. For space requirements of an installed configuration in the laboratory, refer to (→ Space Requirements / Page 13).

During installation, ensure there is enough room in the laboratory to stage boxes from the delivery. These boxes contain system installation parts, including covers and parts that must be installed in an analyzer, DL, SH, SHC or Decapper.

Each configuration will have different numbers of boxes.

Tab. 1 System Dimensions* (see note below)

	Height	Width	Depth	Weight
Sample Handler	1465 mm (57.7 in.)	876.3 mm (34.5 in.)	1431.3 mm (56.4 in.)	464.5 kg (1024 lb.)
Chemistry Analyzer	1363.5 mm (53.7 in.)	1452.5 mm (57.2 in.)	1183.3 mm (46.6 in.)	470.4 kg (1037 lb.)
Immunoassay Analyzer	1500 mm (59.1 in.)	1452.5 mm (57.2 in.)	1167 mm (45.9 in.)	594.7 kg (1311.1 lb.)
Direct Load	1365 mm (53.7 in.)	425.3 mm (16.7 in.)	1150 mm (45.3 in.)	124.3 kg (273 lb.)
Sample Handler Connect	1350 mm (53.1 in.)	400 mm (15.7 in.)	1350 mm (53.1 in.)	117.9 kg (260 lb.)
Decapper	1223 mm (48.1 in.)	254 mm (10 in.)	1109 mm (43.7 in.)	79.4 kg (175 lb.)

Dimensions given include:

- track for a track system (analyzers / SH / SHC / Decapper) but exclude the Magline loop track between the SH and an Analyzer
- reagent loader, panels and covers in place for a stand-alone system (analyzers / DL)

Tab. 2 Crated Analyzer / SH / SHC / DL / Decapper Dimensions

	Height	Width	Depth	Weight
Sample Handler	1752.6 mm (69.0 in.)	2235.2 mm (88.0 in.)	1270 mm (50.0 in.)	645.1 kg (1422 lb.)
Chemistry Analyzer				630 kg (1388.9 lb.)
Immunoassay Analyzer				770 kg (1697.6 lb.)
Direct Load	1651 mm (65.0 in.)	2260.6 mm (89.0 in.)	1041.4 mm (41.0 in.)	287.4 kg (633.6 lb.)
Sample Handler Connect				242.9 kg (535.5 lb.)
Decapper	1353 mm (53.25 in.)	572 mm (22.5 in.)	1181 mm (46.5 in.)	123 kg (271 lb.)

3.1.1 Unloading Area

1. Is there a loading dock?	Yes ☐	No ☐
2. If a loading dock is present, is the loading dock height adjustable?	Yes ☐	No ☐
If the above answer is No, what is the height of the loading dock from the ground?		
3. If a loading dock is not present, special lifting equipment must be provided by the trucking company for a “sidewalk delivery.” Will this be a sidewalk delivery?	Yes ☐	No ☐
If the above answer is Yes, the trucking company will require a description of the unloading area, including the distance from the unloading area to the building and any special lifting requirements. Provide a brief description of the unloading area in the Comments field below.		
Comments:		
4. Is there enough space on the loading dock or somewhere else to support the delivery of the crated module configuration (e.g., DL/CH or IM, ScI, SccII, etc.) and perform the uncrating of the modules the site is ordering?	Yes ☐	No ☐
5. Can a 14 m (46 ft.) trailer be backed into the loading area?	Yes ☐	No ☐

6. On which days and during what hours can the shipment be received?		
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

3.1.2 Installation Route

Each analyzer / SH / SHC / DL / Decapper fits through a 1067 mm (42.0 in.) delivery pathway without the need to remove any subassemblies.

Each analyzer / SH fits through an 863 mm (34.0 in.) delivery pathway after the removal of some subassemblies.

1. Do all door turns on the installation route have a minimum radius of 1690 mm (66.5 in.)?	Yes ☐	No ☐
Comments:		
2. Do all doors and hallways along the installation route meet the following requirements? **Minimum width**: 1067 mm (42.0 in)	Yes ☐	No ☐
Comments:		
3. Will an elevator be used during delivery?	Yes ☐	No ☐
If the above answer is Yes, please note the dimensions of the elevator (including the door opening dimensions) in the Comments field below.		
Comments:		
4. Are there stairs on the installation route?	Yes ☐	No ☐
If the above answer is Yes, please note the number of stairs and the width of the stairway(s) in the Comments field below.		
Comments:		
5. Is the floor along the delivery route smooth and free of sills/gaps?	Yes ☐	No ☐

If the above answer is No, ramps are required. Please indicate the number of ramps required in the Comments field below.		
Comments:		
6. Describe any other obstacles or factors that may impact delivery in the Comments field below.		
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

4.1 Environmental Requirements

4.1.1 System Specifications

4.1.1.1 Thermal Output Specifications

Tab. 3 Thermal Output

Type	Idle	Running
CH	1300 Watt 4450 BTU/hr	1530 Watt 5210 BTU/hr
DL	154 Watt 525 BTU/hr	300 Watt 1024 BTU/hr
IM	1300 Watt 4450 BTU/hr	1330 Watt 4530 BTU/hr
SH	735 Watt 2506 BTU/hr	1073 Watt 3661 BTU/hr
SHC	386 Watt 1317 BTU/hr	866 Watt 2955 BTU/hr
Decapper	240 Watt 819 BTU/hr	720 Watt 2456 BTU/hr

4.1.1.2 Noise Specifications

The System shall meet applicable Noise Rating (NR) and Noise Criteria (NC) for medical devices in laboratories. Note: NR is used for European markets, NC is used for United States and Non-European markets.

The average sound pressure level for any analyzer / SH / DL / Decapper when utilizing the ISO3744 25 or 9 point measuring technique or the minimum of 9 point (1 meter away with analyzer / SH / DL / Decapper on a reflecting plane) shall satisfy NC-46. Exception: the IM analyzer shall satisfy NC-55.

The average sound pressure level for an ScI when utilizing the ISO3744 25 or 9 point measuring technique or the minimum of 9 point (1 meter away with analyzer / SH on a reflecting plane) shall satisfy NC-45.

Below is the average noise output from an SH, the analyzers, the Decapper and an ScI configuration:

- SH: 53 dBA
- CH: 50 dBA
- IM: 65 dBA
- ScI: 65 dBA

- Decapper: 46 dBA

4.1.2 Site Requirements

4.1.2.1 Space Requirements

The following clearances around an installed system are required (left and right are from the front perspective of the system):

- 609.6 mm (24 in.) on the right side of the system. (Maintain this clearance for installations that are being expanded, for example, with the addition of a Decapper at the end.)
- 609.6 mm (24 in.) on the left side of DL or non-connected SH configuration.
- 914 mm (36 in.) **minimum** / 1371.6 mm (54 in.) **recommended** in the front of a SH configuration.
- 609.6 mm (24 in.) in the front of a DL configuration.
- 914 mm (36 in.) in the rear of any system.

Refer to the following dimensions when planning the laboratory layout for the Atellica Solution configuration.

Adding all of the width values together for the applicable components / modules listed in (→ Tab. 1 Page 8) will most likely result in a width value larger than the actual configuration width. This is due to overlap of some components / modules when they are installed together. To calculate the dimension values of a specific configuration, use the EasyCalc tool (→ EasyCalc Tool / LDAT-000.840.21).

The overall width of a Decapper installed between analyzers or on the end of a configuration is the width of a Decapper plus 90 mm (3.5 in.) as a result of the overlap of the track on each side of the Decapper (approximately 45 mm (1.75 in)). A Decapper in the Magline loop does not add any additional width to a configuration.

Below are the footprints of several common configurations for the Atellica Solution, including the applicable service areas.

The following images show the minimum service clearance.

Fig. 1: Atellica SH with Analyzers (ScI)

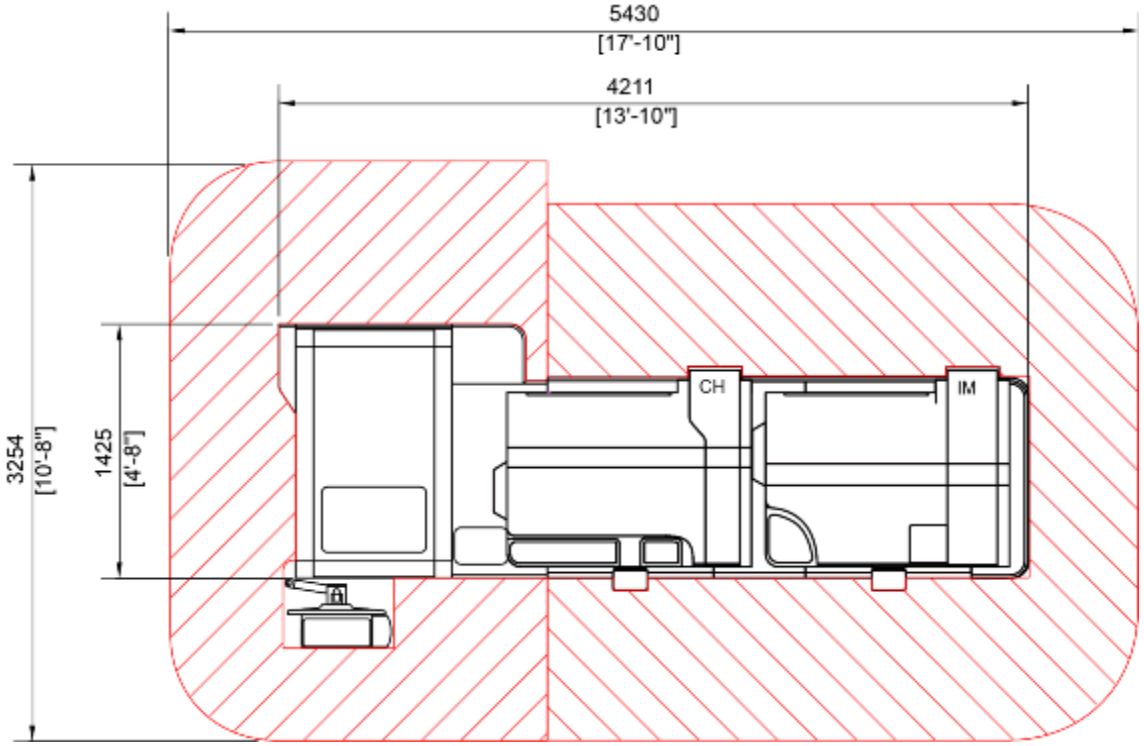


Fig. 2: Atellica Solution with Multiple Sample Handlers (SSccII)

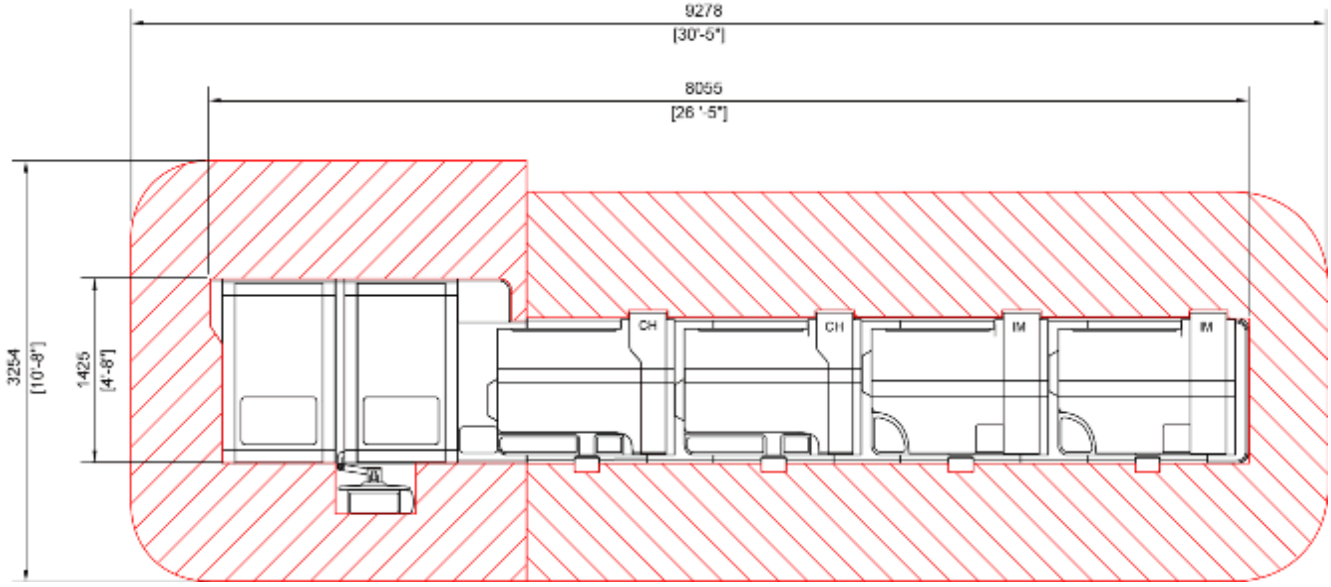


Fig. 3: Atellica SH with Analyzers and Sample Handler Connect (sScI)

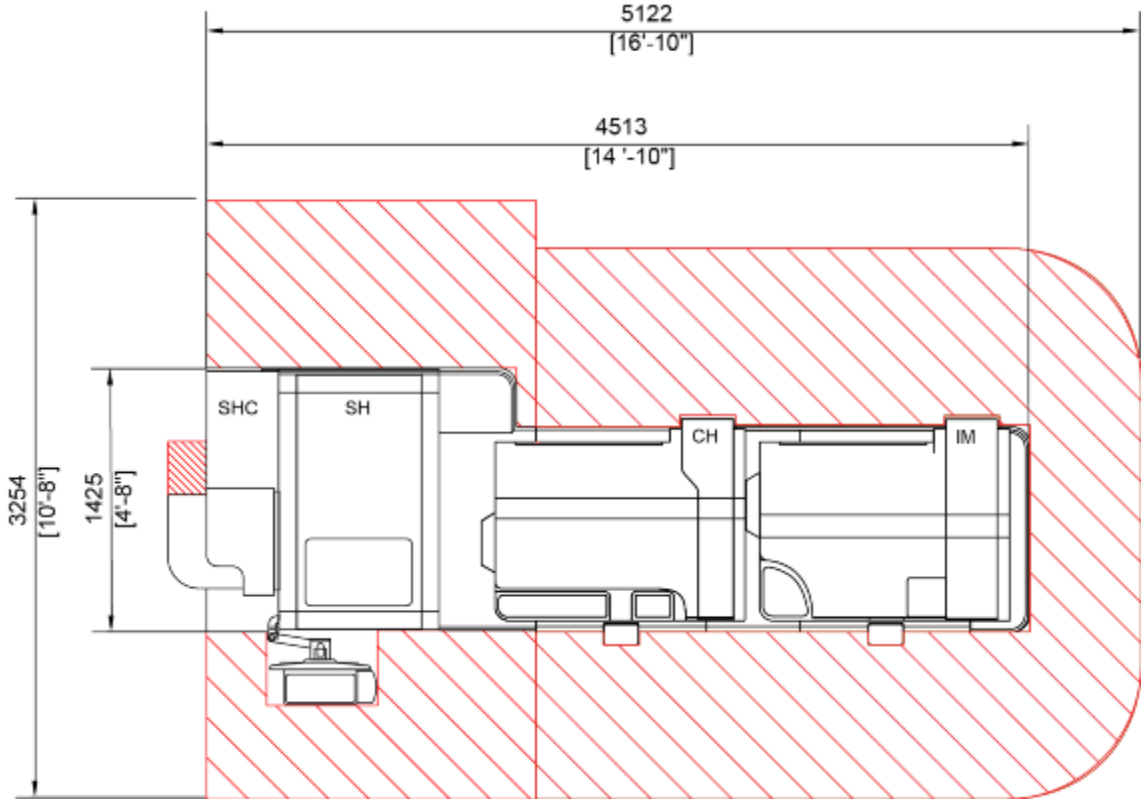
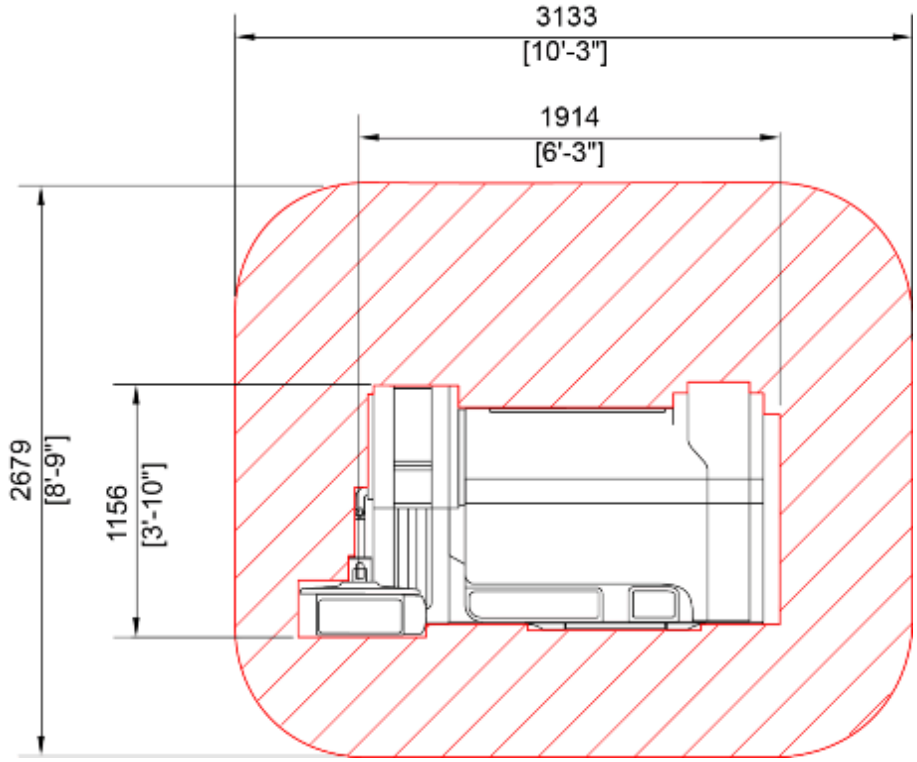
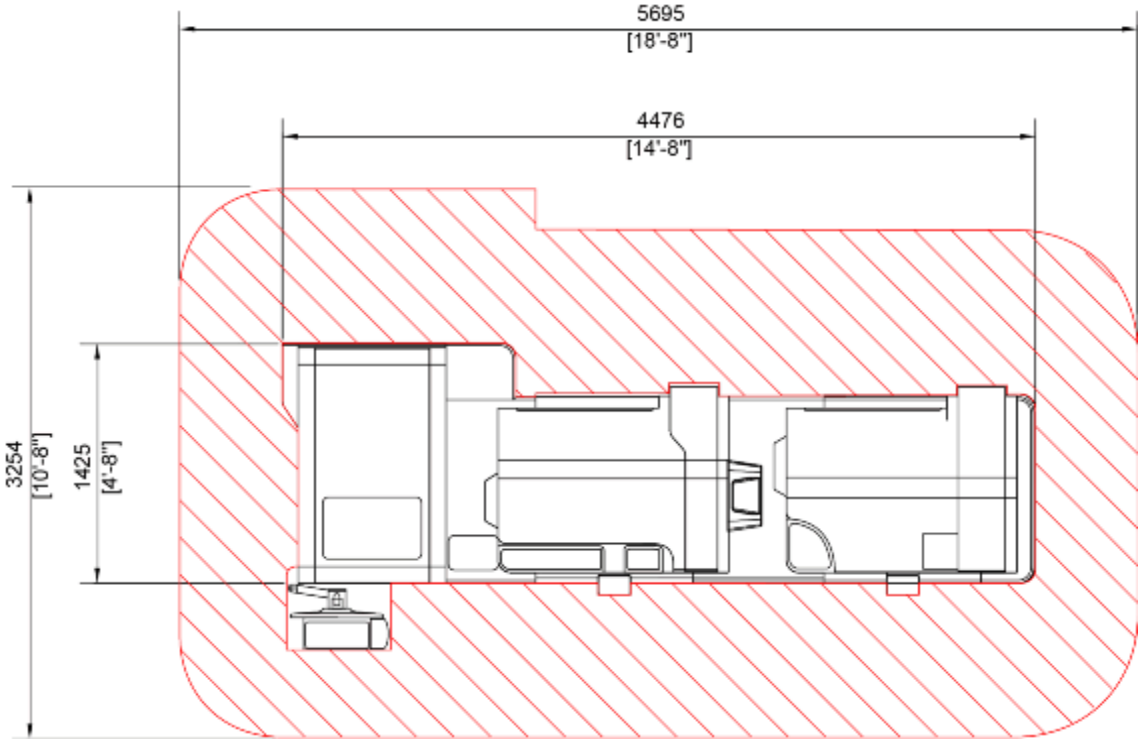


Fig. 4: Atellica CH Analyzer with Direct Load



The widths and depths are the same for an Atellica IM Analyzer with Direct Load as above.

Fig. 5: Atellica SH with Analyzers and Decapper (ScDI)



4.1.3 Customer Site

1. The Atellica Solution System requires: ▪ Ventilation sufficient to maintain 18–30 °C (64–86 °F) operating temperature, with a maximum temperature change of 3 °C/hour. ▪ Relative humidity of 20–80% with system operating with no condensation.		
Has the assigned plant/maintenance engineer verified that throughout the year, the proposed system location meets these requirements?	Yes ☐	No ☐

2. Space around the system must be sufficient to allow access by the user. There must be a minimum of: ■ 91.4 cm (36 in.) behind the system (connected, non-connected, and DL) ■ 61.0 cm (24 in.) on the left of the system (non-connected system or DL system) ■ 61.0 cm (24 in.) on the right of the system (connected, non-connected, and DL) ■ 91.4 cm (36 in.) in the front of the system; 61.0 cm (24 in.) in front of a DL system.		
Does the proposed system location meet these requirements?	Yes ☐	No ☐
3. Air conditioning and heating ducts should not blow directly on the system, nor should the system be exposed to direct sunlight.		
Does the proposed system location take these restrictions into consideration?	Yes ☐	No ☐
4. Did you discuss the potential for locating the system to allow space for future expansion with the customer?	Yes ☐	No ☐
5. Is a Decapper being added between analyzers to an existing system installation? If the response is Yes, order new water and waste tubing to accommodate the additional length of the installation.	Yes ☐	No ☐
6. Is the site elevation between 0 m and 2000 m (6562 ft.)?	Yes ☐	No ☐
What is the site's elevation in meters (±100 m)?		
7. The system should be placed on a level floor (45 mm maximum height variation) that is capable of supporting a load* specific for the customer's configuration that includes two or more of the following:	***Floor Load**	
SH: 464.5 kg (1035 lb) / 1221.5 mm (48.1 in) W x 1431.3 mm (54.4 in) D =	266 kg/m^2	
DL: 124.3 kg (273 lb) / 425.3 mm (16.7 in) W x 1150 mm (45.3 in) D =	254 kg/m^2	
CH: 470.4 kg (962 lb) / 1452.5 mm (57.2 in) W x 1183.3 mm (46.6 in) D =	274 kg/m^2	
IM: 594.7 kg (1308 lb) / 1452.5 mm (57.2 in) W x 1167 mm (46.9 in) D =	351 kg/m^2	
SHC: 117.9 kg (260 lb) / 400 mm (15.7 in) W x 1350 mm (53.1 in) D =	218 kg/m^2	
Decapper: 79.4 kg (175 lb) / 250 mm (9.8 in) W x 1109 mm (43.7 in) D =	286 kg/m^2	
*The module floor load is presented above. There will be higher concentrated loads at each caster or leveling foot (see below).		
Distance of Feet from Each Other**	**Load per Foot**	

SH: 715 mm (side to side); 1050 mm (front to back) **DL**: 768.3 mm (front to back) **CH**: 1283.6 mm (side to side; 713.1 mm (front to back) **IM**: 1283.6 mm (side to side): 713.1 mm (front to back) **SHC**: 215.5 mm (side to side); 1050 mm (front to back) **Decapper:** 151.0 mm (side to side); 739.5 mm (front to back)	122.5 kg 62.4 kg 126.6. kg 155.5 kg 29.5 kg 19.9 kg	
**Refer to images in the "Distances Between Feet" section (➔ Distances Between Feet / Page 19) for feet distances.		
Can the floor support the load of the configuration?	Yes ☐	No ☐
8. Is seismic anchoring required?	Yes ☐	No ☐
9. What is the pitch of the floor? Use the steps below this table to calculate the pitch and enter the value in the field below.		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

4.1.3.1 Determine the Pitch of the Floor

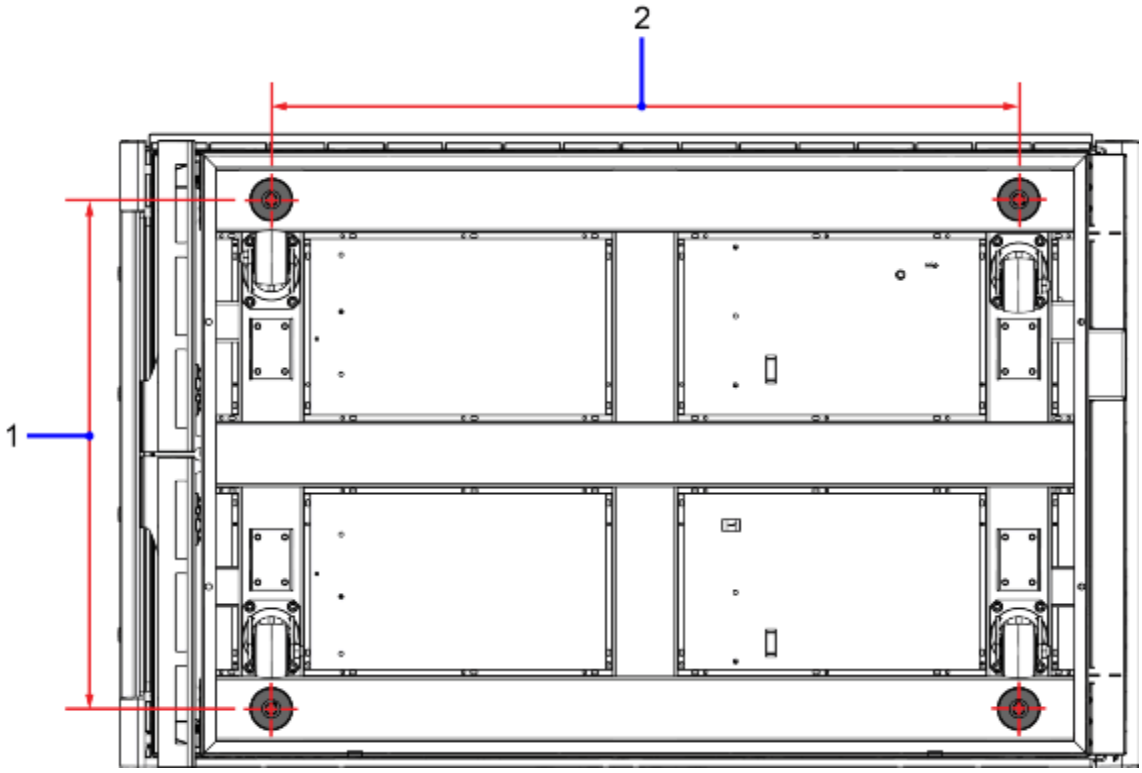
This section is not necessary if using a laser level.

1. Attach a long piece of string (at least as long as the length of the Atellica Solution configuration) to a ruler.
2. Place the ruler-end of the string at the end of the configuration space that is suspected to be the lower of the 2 endpoints.
3. Place the other end of the string at the end of the configuration space that is suspected to be the higher of the 2 endpoints.
4. With a second person holding the end of the string on the floor, raise the string up on the ruler end until the string appears level.
5. With a third person measuring the string so that is level, continue to adjust the height of the string on the ruler until the string is level.
6. Measure the height of the string on the ruler.

If the height is greater than 1 1/4”, 1 spacer per leveling foot (4 for each analyzer / SH / SHC / Decapper; 2 for DL) is required for each multiple of 1 1/4”. For example, if the height is 3” on an ScI system, 8 spacers will be required for the IM analyzer.

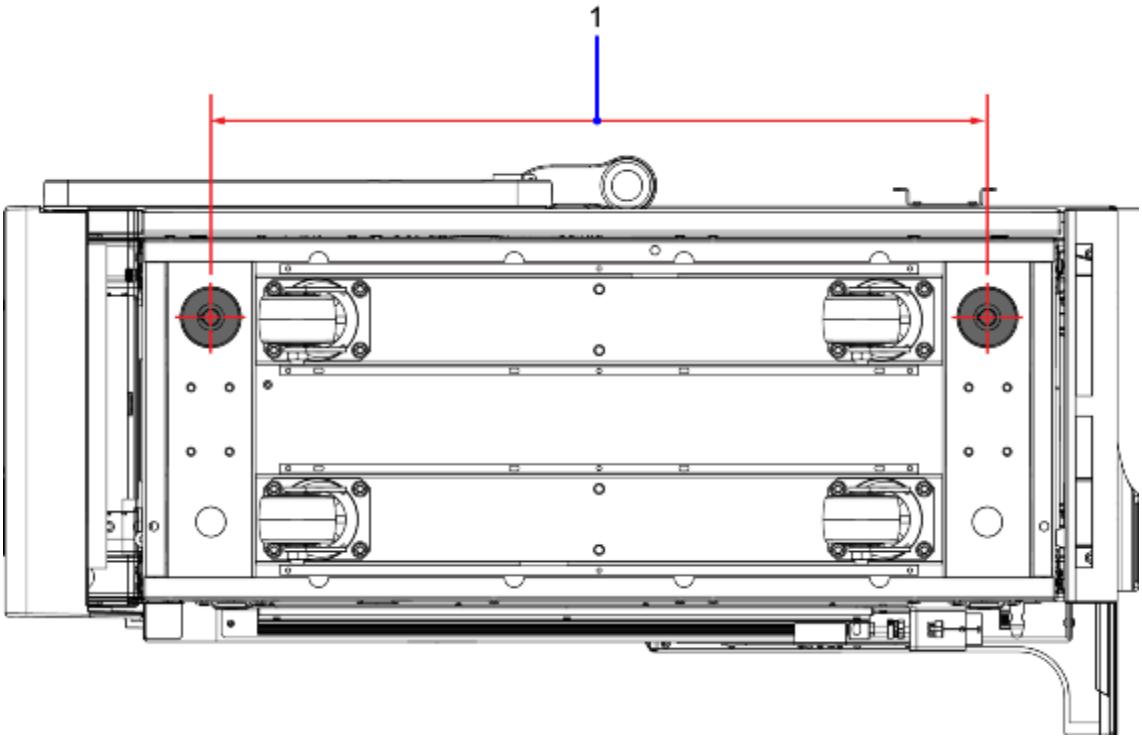
4.1.3.2 Distances Between Feet

Fig. 6: SH - Distances Between Feet



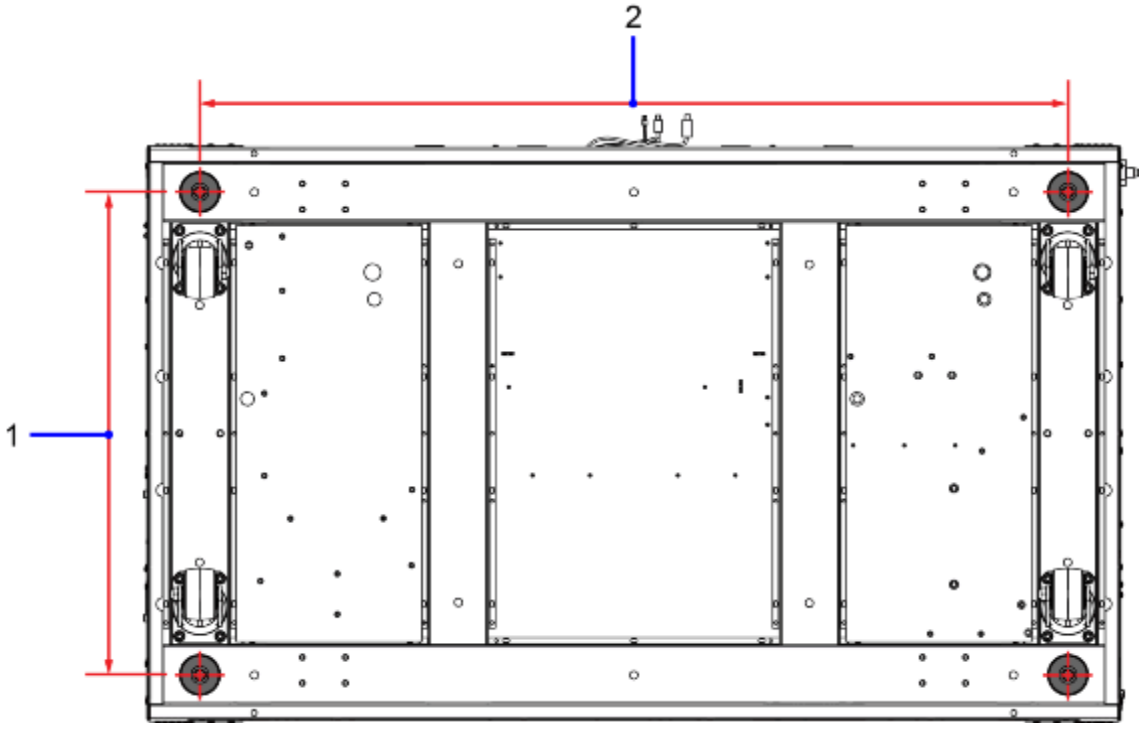
(1) Side to Side: 715 mm
(2) Front to Back: 1050 mm

Fig. 7: DL - Distances Between Feet



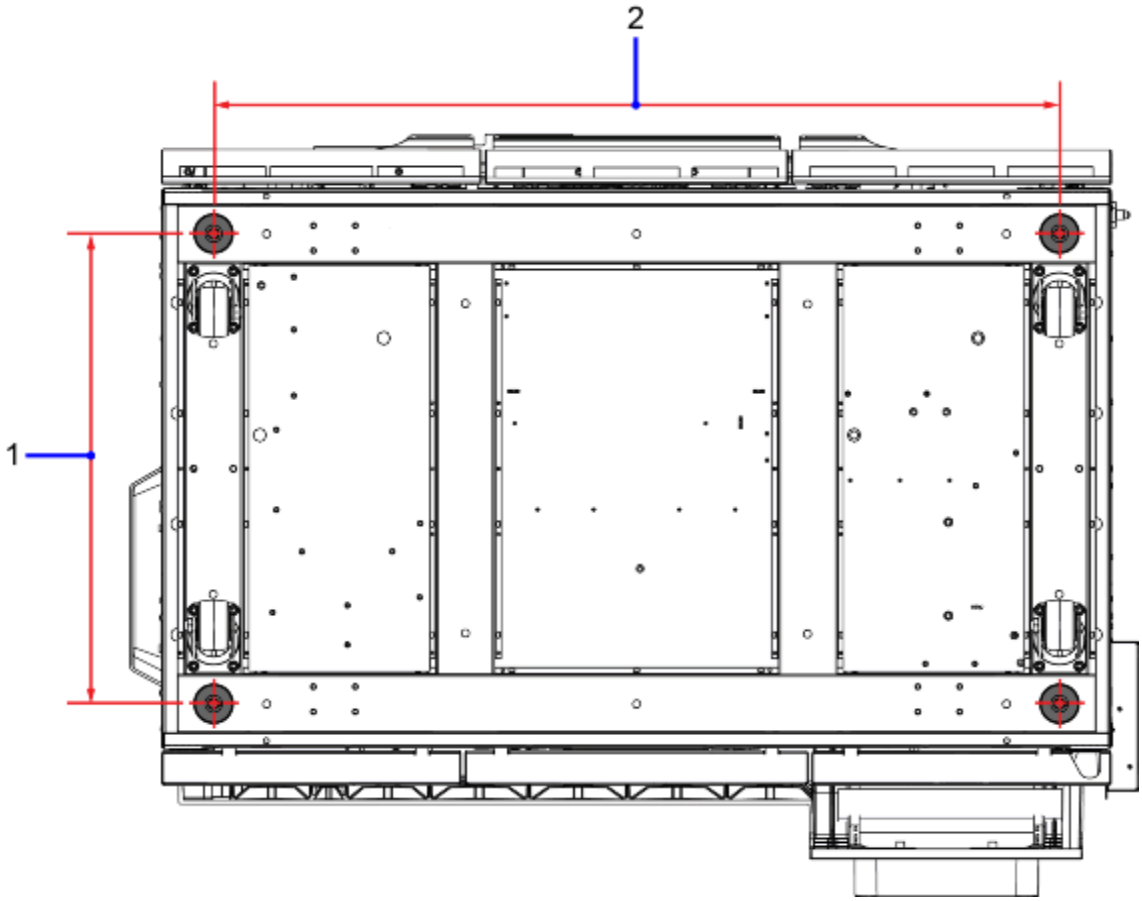
(1) Front to Back: 768.3 mm

Fig. 8: CH - Distances Between Feet



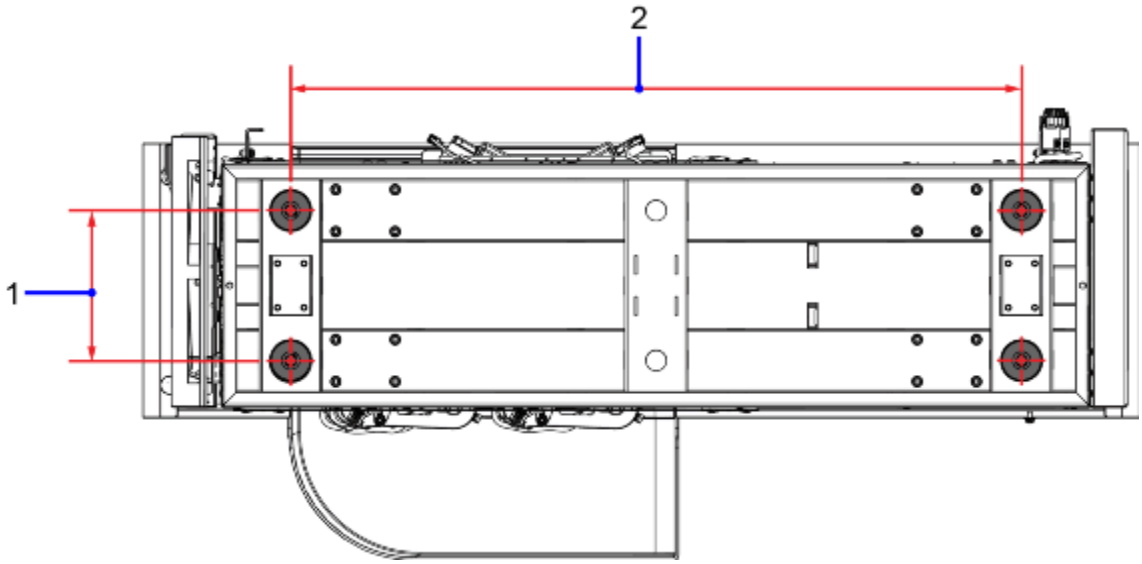
(1) Front to Back: 713.1 mm
(2) Side to Side: 1283.6 mm

Fig. 9: IM - Distances Between Feet



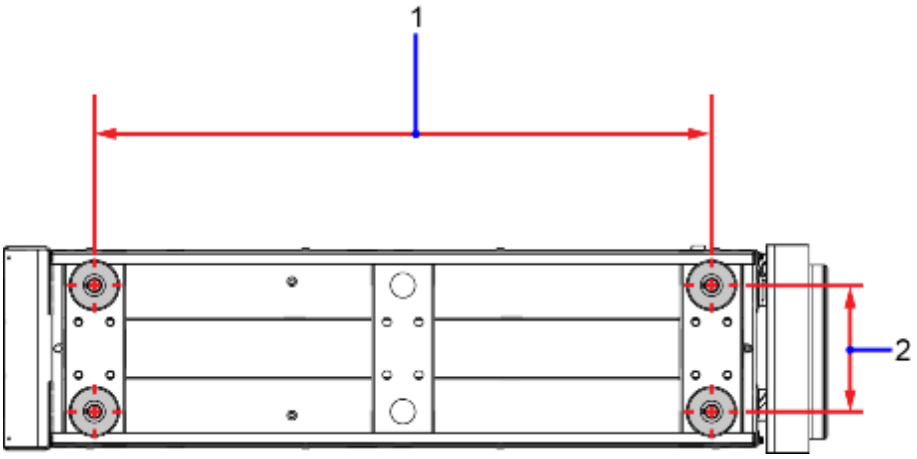
(1) Front to Back: 713.1 mm
(2) Side to Side: 1283.6 mm

Fig. 10: SHC - Distances Between Feet



(1) Side to Side: 215.5 mm
(2) Front to Back: 1050 mm

Fig. 11: Decapper - Distances Between Feet



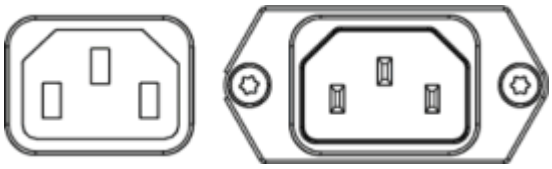
(1) Front to Back: 739.5 mm
(2) Side to Side: 151.0 mm

5.1 Power Requirements

5.1.1 Site Requirements

- The Atellica Solution analyzers / SH / DL are shipped with a NEMA 6-20P (230VAC, 20A) plug. The plug can be changed if necessary to meet local requirements.
- Each analyzer or SH (not including SHC, DL, or DC, which is powered through the analyzer) requires a 4.4 kVA (USA) or 3.7 kVA (Europe) power source, single-phase, two-pole, three-wire configuration with Class III grounding. An analyzer / SH shall support incoming AC voltage from a nominal line voltage range of 200-240VAC, 50/60Hz. The main supply voltage fluctuations are not to exceed ±10 percent of the nominal voltage.
- Each Decapper requires a .72 kVA (USA) or .69 kVA (Europe) power source, single-phase, two-pole, three-wire configuration with Class III grounding. A Decapper shall support incoming AC voltage from a nominal line voltage of 240v, 50/60Hz. The main supply voltage fluctuations are not to exceed ±10 percent of the nominal voltage.
- The Atellica Decapper is shipped with an IEC 60320 C14 recessed power inlet. The Decapper requires a 5.0 meter power cord with an IEC 60320 C13 connector and a plug suitable for use by local regulations that matches the installed receptacle.

Tab. 4 Decapper Power

Connector	Appliance Inlet	Configuration (Connector/Inlet)	Grounded	Max Current		Voltage	
				Int'l	N.America	Int'l	N.America
C13	C14	*Fig. 12: C13 Plug Connector/C14 Power Inlet* 	Yes	10A	15A	250V	125/250 V

- The Atellica Solution system conforms to Installation/Overvoltage Category II (as specified in IEC 61010-1).
- The Maximum Inrush Current is 250 A @ 3.3 ms for Atellica Solution analyzers.
- The circuit must have a separate, dedicated (NOT ISOLATED) line L1, L2 and dedicated (NOT ISOLATED) ground in its own conduit. The conduit should start at the distribution panel and be continuous to the receptacle. Three-wire distribution to the receptacle is required for each Atellica Solution analyzer, DL, SH, or SHC. The third (green or green/yellow) ground wire should start at the distribution panel and be continuous to the receptacle in accordance with NEC paragraph 250.146 (D), exception 4, unless local codes prohibit. The ground wire can not be tied to grounds from other loads.
- The customer must provide a receptacle installed by a qualified electrician before arrival of the Atellica Solution. The receptacle must be accessible to the 5.0 meter power cord furnished with the Atellica Solution. The USA requires 20 Ampere, 250 Volt receptacle, Hubbell receptacle # HBL5461. Outside USA requires a 16 Ampere or greater receptacle.
- Where the specified North America plug cannot be used, the customer must provide a power plug suitable for use by local regulations that matches the installed receptacle.

The power plug must be compatible with 3 conductor 3.31 mm^2 and the strain relief able to accept minimum 11.2 ± 0.15 mm diameter cordage.

Tab. 5 Current Draw

Mode	Current (60 Hz, 220 V)	Current (50 Hz, 220 V)
In-Rush with Main Breaker ON	250 A @ 3.3 ms	250 A @ 3.3 ms
Operation- Peak	8 A	8 A
Main Circuit Breaker Rating	20 A long delay in USA, outside USA use MCB 16 A Type-C or 16 A Type-D	Outside USA use MCB 16 A Type-C or 16 A Type-D.

Tab. 6 Mains Input Plug

Cat. No. (Black Cover) (Black Cord Clamp)	Cat. No. (Clear Cover) (Natural Cord Clamp)	Cat No. Hospital Grade (Clear Cover) (Nat. Cord Clamp)	Configuration	Rating	UL	CSA
HBL5466CA			*Fig. 13: NEMA 6-20P* 	20A / 250V	Yes	Yes

Tab. 7 Mains Receptacle

Catalog Numbers			Hospital Grade	Color	Configuration	Rating
Ring Terminal	Standard	Marine				
	HBL5461			Brown	*Fig. 14: NEMA 6-20R* 	20A / 250V
	HBL5161I			Ivory		

5.1.1.1 External UPS (Optional) Requirements

New system installations that will use UPS should be wired using a circuit and receptacle to match the specifications of the UPS. If the system will not be using a UPS, then a 20 A (USA) / 16 A (Outside USA) circuit per analyzer / SH / DL / SHC is sufficient.

Tab. 8 External UPS Minimum Requirements: Input / Output

Input	Value	Output	Value
Voltage (VAC)	200 to 240	Capacity	3000VA / 2700W
Phase	Single	Voltage (VAC)	200 / 208 / 220 / 230 / 240
Frequency (Hz)	50 / 60	Voltage Regulation	±3.0% Max

Input	Value	Output	Value
Input Connection	NEMA L6-20P	Output Voltage THD	< 3.0% for linear loads < 5.0 % for non-linear loads
Generator Compatibility	Yes	Frequency (Hz)	50 / 60
		Frequency Regulation	± 0.5 Hz
		Output Connections	L6-30R L6-20R

Tab. 9 External UPS Minimum Requirements: Battery

Attribute	Value
Back Up Time (minutes)	≥ 8.0 @ Full Capacity
Recharge Time	≤ Recharge to 90% within 10x's actual discharge time

Tab. 10 External UPS Minimum Requirements: Environment

Attribute	Value
Operating Temperature (°C)	10 to 40
Operating Altitude (meters)	2000
Humidity (% RH non-condensing)	5 to 90
Heat Dissipation (BTU/Hour)	< 1650

Tab. 11 External UPS Minimum Requirements: Agencies

Attribute	Value
EMC	CISPRR Class B FCC part 15 Class B / ICES-003 IEC61000-4-2 IEC61000-4-3 IEC61000-4-4 IEC61000-4-5 IEC61000-4-6 IEC61000-4-8
Safety	IEC 62040-1:2008

Tab. 12 External UPS Minimum Requirements: Other

Attribute	Value
Topology	True On-Line, Double Conversion, Pure Sine Wave
Communication	None
Seismic Compatibility	Yes

5.1.1.2 Compressor (Decapper-specific) Requirements

Installations that will use a Decapper and do not have house air will need a compressor. The installation should be wired using a circuit and receptacle to match the specifications in the compressor documentation.

5.1.2 Customer Site

1. List the system configuration(s) to be installed and the total number of dedicated circuits required (Examples: SCI – 3, DL+ IA – 1):		
2. Will this installation include an external UPS for each analyzer or SH?	Yes ☐	No ☐
If Yes, please list the total number of UPSs and for which analyzers / SH / DL:		
3. Do the AC power outlets meet the specifications listed in the Power Requirements section above?	Yes ☐	No ☐
If the AC power outlets do not meet the specifications above, instruct the customer to meet with the facility engineer(s) to ensure AC power outlets are installed that can meet the specifications.		
4. Siemens Healthineers recommends a dedicated circuit for each analyzer or SH with or without a UPS. Are dedicated circuits available that meet the circuit breaker ratings below?		
US: 220 V, 20 A **Europe:** 230 V, 16 A Type C or Type D	Yes ☐	No ☐
5. Siemens Healthineers recommends a dedicated power receptacle for each Decapper. Is there a dedicated power receptacle available that meets the ratings below?		
US: 220 V, 3 A **Europe:** 230 V, 3 A	Yes ☐	No ☐
6. Will a compressor be needed to operate the Decapper?	Yes ☐	No ☐
If the above answer is Yes, the customer must supply a power receptacle for the compressor.		

7. List the number of power receptacles available for the Atellica system.		
8. Is an extra power receptacle for a printer located near the system and available?	Yes ☐	No ☐
9. The power cables are 5 m (16 ft.) long. Will these cables be routed across walkways?	Yes ☐	No ☐
If the above answer is Yes, the customer must supply cable guards, as well as a power receptacle.		
10. If an emergency generator is used, is a power conditioner available?	Yes ☐	No ☐
11. In the space below, provide a diagram of the AC receptacle, or list the AC power outlet configuration.		
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

6.1 Water Requirements

6.1.1 Site Requirements

- Special Reagent Grade water (SRW) (CLSI C3-A4 Reagent Laboratory Water, with exceptions noted below).
- Individual water supply units can be used or a single, centrally located system can supply the water to all analyzers.
- IM and CH analyzers accept incoming reagent grade water from the customer facility at a regulated pressure between 5 PSI and 30 PSI.
- The CH analyzer consumes less than 33 liters of water per hour for steady state operation.
- The IM analyzer consumes less than 6 liters of water per hour for steady state operation.
- The IM and CH analyzers demand incoming water at a flow rate between 2.0 L/min. and 4.5 L/min (depending on the pressure).
- Temperature of water from the supply: 10-30 °C
- The system is supplied with 10 m (33 ft.) of 3/8" OD x .245 ID Polyurethane tubing, which is used for the SRW water connection. Size the SRW water fittings accordingly and use only compression type fittings due to water hammer effects.
- Acceptable CFU/mL (by test source):
  - Laboratory water system output ≤ 50 CFU/mL*

    * Based on CLSI/CAP Reagent Grade water specifications

6.1.2 Customer Site

1. Is SRW located on site?	Yes ☐	No ☐
If the above answer is No, a SRW supply system able to supply pressurized water will be required.		
Comments:		
2. Does the water meet the following specifications for Special Reagent Water (SRW)? ■ Resistivity (≥ 10 MΩ-cm) ■ Bacteria (≤ 50 CFU/mL) ■ TOC – Total Organic Carbon (≤ 500 ppb) ■ A 0.22 micron filter is required at the output stage of the laboratory water purification system and an additional 0.22 micron filter is required before the input to the water supply for each analyzer Refer to the Water Quality Testing document (➔ Water Quality Testing / LDAT-000.840.10)for testing information.	Yes ☐	No ☐

Comments:		
3. Some laboratories may require special pre-filters to the SRW unit. Are filters required? For example: ■ Sand and carbon filters for dissolved organics ■ Colloidal filter for high iron content water ■ Pretreatment (softening) kit for dissolved inorganics Consult with a local water purification company if necessary. List any required filters in the Comments field below.	Yes ☐	No ☐
Comments:		
4. Are the SRW parameters within the specifications listed in question 2 above? List any parameters that do not meet the specifications in the Comments field below.	Yes ☐	No ☐
Comments:		
5. Is the water pressure regulated to between 5 PSI (min) and 30 PSI (max)?	Yes ☐	No ☐
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

7.1 Drain Requirements

7.1.1 Customer Site

1. Is a floor drain located within 9.1 m (30 ft.) of the back of the system?	Yes ☐	No ☐
2. A drain can be located at a maximum height of 122 cm (48 in) from the floor. Is the drain height acceptable?	Yes ☐	No ☐
3. Is the drain capable of handling a minimum of 100 L/hr. (1.7 L/min) per analyzer?	Yes ☐	No ☐
4. The waste pipe inlet must be large enough to accommodate various tubes. A 76.2 mm (3 in.) diameter drain pipe is recommended.		
Is the diameter of the drain pipe acceptable?	Yes ☐	No ☐
5. Do the local laboratory practices and/or applicable environmental regulations allow for waste to be routed into the laboratory's drain?	Yes ☐	No ☐
6. If a compressor requiring a drain is installed to support a Decapper, is the drain located within the distance specified in the compressor documentation?	Yes ☐	No ☐
If the above answer is No, are there plans to install a drain?	Yes ☐	No ☐
If the response to the previous question is No, the drainage system will require an upgrade.		
7. On what date will this upgrade be completed?	Date	
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

8.1 Air Supply Requirements

The Decapper has no internal air compressor and requires the use of either laboratory air supply or a client-supplied air compressor.

8.1.1 Air Supply Information

8.1.1.1 System Requirements

The Atellica Solution Decapper module:

- consumes 1.76 NLPM (.062 CFM) of compressed air per minute
- provides air cut-off and air regulator control with an air pressure gauge on the rear panel
- has a 6 mm pneumatic tubing input connection on the rear panel
- should, once connected to the air supply, show an air pressure reading between .6 MPa (Megapascal) and .65 MPa (87 PSI to 94 PSI) on the gauge at the back of the Decapper
- operates at an altitude of up to 2000 meters (6562 ft.)

8.1.1.2 Site Requirements

Either laboratory air supply or client-supplied air compressor that:

- supplies between 90 and 100 PSI to a Decapper
- supplies an air flow of 1.76 NLPM (.062 CFM) per minute to a Decapper
- uses a compressed air dryer
- uses a drain for condensation run-off
- meets the following compressed Air Purity Class 1 output rating (clean, oil-free and dry compressed air) per ISO 8573-1:2010:

Class Item	Values
Particles	■ Less than or equal to 20,000 particles per cubic meter (between 0.1 micrometer and 0.5 micrometer) ■ Less than or equal to 400 particles per cubic meter (between 0.5 micrometer and 1.0 micrometer) ■ Less than or equal to 10 particles per cubic meter (between 1.0 micrometer and 5.0 micrometer)
Humidity and Liquid Water	Pressure dew point less than or equal to -70 degrees Celsius
Total Oil	Less than or equal to 0.01 milligrams per cubic meter

8.1.1.3 Customer Site

1. Does the laboratory have a single, centrally located air supply system? If the response is No, proceed to question 10.	Yes ☐	No ☐
2. Does the system have a pressure regulator, pressure gauge and control valve to ensure appropriate air supply to one or more De-cappers? If the response is No, these items should be installed.	Yes ☐	No ☐
3. Does the air supply have an air filtration system that meets the specified Air Purity Class 1 output rating? If the response is No, a filter/dryer needs to be installed.	Yes ☐	No ☐
4. Each Decapper consumes 1.76 NLPM (.062 CFM) per minute. Enter the total required rate of air flow, in either Normal Liters per minute (NLPM) or Cubic Feet per minute (CFM).	NLPM CFM	
5. What is the current CFM usage of the air supply system? What is the minimum CFM supplied by the air supply system?	Current CFM Minimum CFM	
6. The required air supply to be delivered to each Decapper is between .6 MPa (Megapascal) and .7 MPa (87 PSI to 101.5 PSI). Confirm that the required pressure is available at each Decapper location.	Yes ☐	No ☐
7. What is the minimum pressure provided by the air supply system?	Min PSI	
8. Can the existing air supply system handle the additional air requirements (CFM and PSI) listed above?	Yes ☐	No ☐
Comments:		
If No, are there plans to improve the air supply system?	Yes ☐	No ☐
If the response to the previous question is No, the house-supplied air supply system will require an upgrade.		
9. On what date will this upgrade be completed? Go to question 21.	Date	
10. **Atellica Systems requiring an air compressor unit:** Each Decapper consumes 1.76 NLPM (.062 CFM) per minute. Enter the total required rate of air flow, in either Normal Liters per minute (NLPM) or Cubic Feet per minute (CFM).	NLPM CFM	

11. The required air supply to be delivered to each Decapper is between .6 MPa (Megapascal) and .7 MPa (87 PSI to 101.5 PSI). Confirm that the required pressure is available at each Decapper location.	Yes ☐	No ☐
12. Will the air compressor be operating at a high altitude? If Yes, compressor performance at higher altitudes needs to be taken into account.	Yes ☐	No ☐
13. Does the air supply have an air filtration system that meets the specified Air Purity Class 1 output rating? If the response is No, a filter/dryer needs to be installed.	Yes ☐	No ☐
14. Did you provide the laboratory supervisor with CFM, PSI and altitude requirements for compressor sizing?	Yes ☐	No ☐
15. Did you discuss ordering requirements and delivery timing with the laboratory supervisor?	Yes ☐	No ☐
16. Establish a date on which to follow up with the laboratory supervisor to confirm the compressor order.	Date	
When will the compressor be on site?	Date	
17. Did the laboratory supervisor provide a date on which the location designated for the compressor will be evaluated to confirm the installation requirements are met? Confirm that the location will provide sufficient air flow and pressure to the Decapper for proper functioning. Refer to the compressor technical specifications for additional information. NOTE: A locally licensed electrician will be needed to make AC power connections.	Yes ☐	No ☐
18. Are a gauge and shut-off valve with standard connecting thread installed?	Yes ☐	No ☐
19. Does the compressor have an internal accumulator/air receiver tank? If the response is No, does the customer have space for the tank? Confirm space for the tank is accounted for and that servicing of the tank is handled by the facility.	Yes ☐	No ☐
20. Is the plumbed line to specification? Refer to the compressor technical specifications for additional information.	Yes ☐	No ☐
21. Are any manifolds being installed to divide the air lines for the number of Decappers being installed? If Yes, factor in the placement of the manifold(s) into the answers for the path, air line length and cut off value questions.	Yes ☐	No ☐
22. What is the path of the air line between the air supply and		

Decapper 1?		
Decapper 2?		
Decapper 3?		
23. What is the length of the air line needed for		
Decapper 1?	Length	
Decapper 2?	Length	
Decapper 3?	Length	
NOTE: It is good practice to install tubing a little longer than needed as the end could be cut off to ensure proper fit.		
24. Each Decapper needs a pneumatic cut off valve installed on the line. How many pneumatic cut off valves are needed?	Qty	
When will the valve be installed?	Date	
25. Have the cut off valves and the air lines been ordered?	Yes ☐	No ☐
26. Have the cutoff valves and the air lines arrived on site?	Yes ☐	No ☐
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		

Comments:

9.1 Remote Connectivity Requirements

9.1.1 Customer Site

Serial connection or transmission control protocol/Internet protocol (TCP/IP) to Serial conversion is not supported. A TCP/IP network connection directly to the Laboratory Information System (LIS) Host must be used.

1. Is there an Atellica CM / sLCM already installed or planned for installation?	Yes ☐	No ☐
If No, then refer to the LCM CB-DOC DCIN-F00.811.06.XX.02 Pre-Installation and perform the Pre-Installation for the LCM while performing the Site Survey for the system.		
If Yes, record the Serial Number and IP Addresses (site and instrument) of the Atellica CM / sLCM.		
Serial number:		
Site IP Address:		
Instrument IP Address:		
If Yes, record the software version of the ACM / sLCM. **Note**: VA20B is the minimum software version that will support Atellica.		
2. What is the length of Network cable (CAT5) required to connect the SH Prime network port (right side rear of SH) to the hospital (WAN) network wall jack (e.g. 7ft., 10ft., 100ft.)?		
☐ 7-foot	10388887 CABLE, CAT V NETWORK 7 FOO	
☐ 10-foot	10388888 CABLE, CAT V NETWORK 10 FOOT	
☐ 25-foot	10388889 CABLE, CAT V NETWORK 25 FOOT	
☐ 50-foot	10287529 CABLE, CAT V NETWORK 50 FOOT	
☐ 100-foot	10388890 CABLE, CAT V NETWORK 100 FOOT	
Ensure you order the appropriate length cable prior to installation of the Atellica Solution (not supplied with the system).		
3. Are there any existing middleware products in use or planned to be used with Atellica? If so, please complete the fields below with required information, or “N/A” if not applicable.		
Middleware Products (e.g Centralink, Inpeco DMS, OneLink, OEM Vendor):		

Local or Regional Automation/IT Consultant (e.g. Siemens or OEM Support Person):	
Local or Regional Automation/IT Consultant Email Address and Phone Number:	
Local or Regional Automation/IT Consultant Signature and Date:	
Signature:	Date:
4. Provide the following information about the site LIS:	
LIS Model	
IP Address	
Port	
Subnet Mask	
Default Gateway	

System Network Requirement/Permission	Responsible Person	Project Completion Date
Siemens requires a **dedicated network port \jack** for the Atellica Solution to access Atellica CM / sLCM and Smart Remote Services (SRS). **Note: The Atellica Solution network uses a 192.168.1.X schema. If the customer's network uses this schema, the customer's IT department needs to change the schema so that the Atellica Solution can connect to the site's network.**		
Confirm the data being monitored by Siemens from the workstation with both the hospital lab manager and the hospital IT group and ensure that permission to monitor instrument data has been approved.		
Laboratory Manager:	Phone Number:	
Hospital IT/Security:	Phone Number:	
Comments:		

Site Network Connection Details	Responsible Person	Project Completion Date
NOTE: Static IP address assignment is preferred. If the customer prefers this method of connectivity, complete the fields below. Note: if static, it can not be a 192.168.1.x schema.		
Complete if Static IP address will be provided.		
Yes ☐ No ☐		
IP Address:	Preferred DNS Server:	
Subnet Mask:	Alternate DNS Server:	
Default Gateway:		
Will we require a proxy to access the Siemens Data Center?	Yes ☐	No ☐
If "Yes," record proxy server address:	Address:	Port:
Does the proxy require authentication?	Yes ☐	No ☐
If "Yes," add Username.	Username:	Password:
Are you using NTLM authentication (when using an ISA server as a proxy server)?	Yes ☐	No ☐
Ensure that a Network port / jack (RJ45) connection will be available at the chosen location for the Atellica Solution. (Reserve and label the network jack for Siemens' use.)		
The internal network router for the Atellica Solution requires an administrator login and password. Record the customer's desired login and password below:		
Router Administrator Login:		
Router Administrator Password:		
Will the Atellica CM / sLCM support connectivity to the Atellica Solution over the customer network?	Yes ☐	No ☐
If the above answer is Yes, the customer must allow access on common IPSEC ports (4500,500) to accommodate the secure connection		

Site Network Connection Details	Responsible Person	Project Completion Date
Comments:		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

10.1 Other Requirements

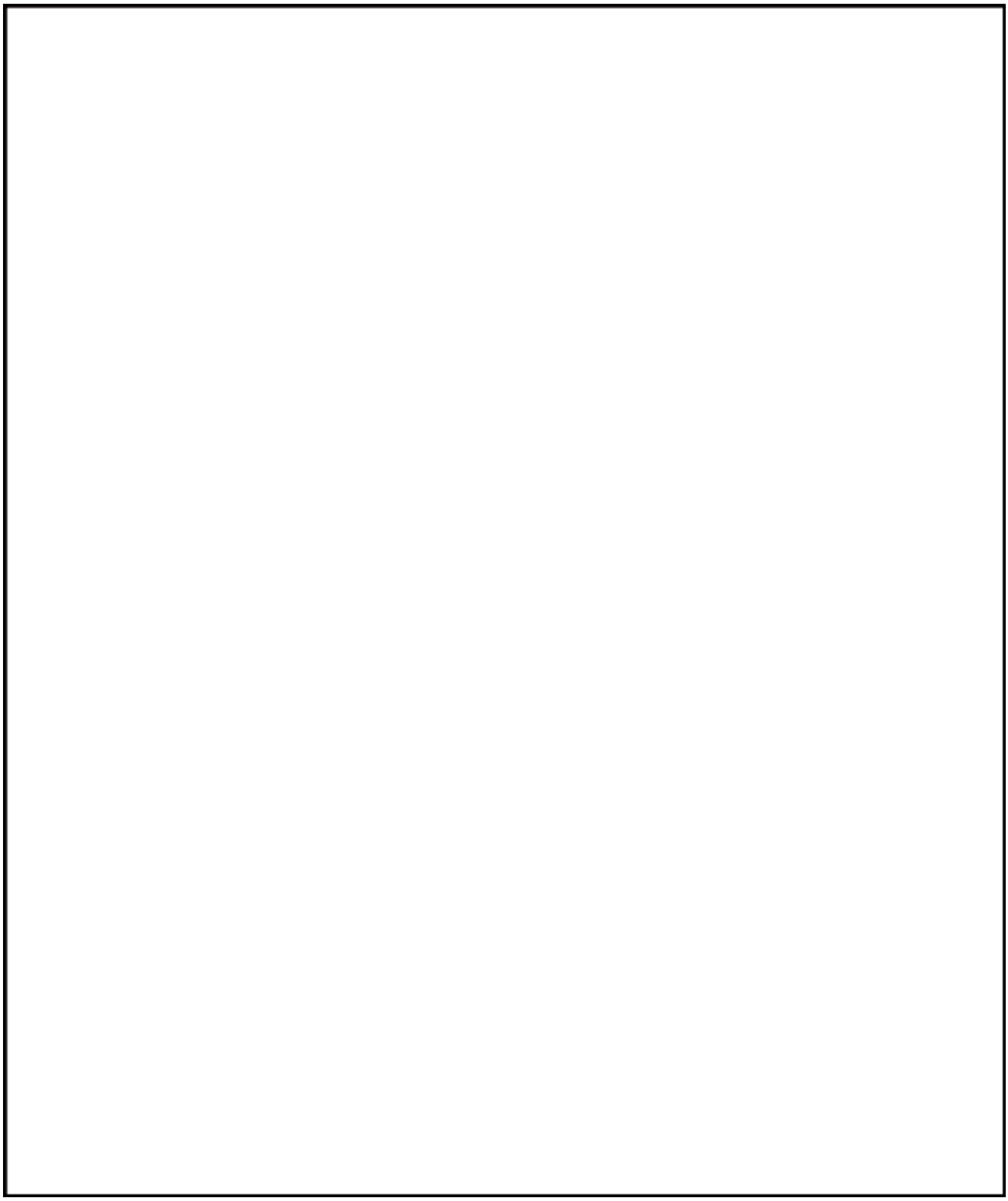
1. Inform the laboratory supervisor that the Atellica Solution System has the following barcode reading capabilities: ▪ Maximum of 20 characters ▪ I2 of 5*, Codabar*, Code 39*, Code 128 * If enabled, I2 of 5 can use check digits and be sent to the host.		
Did you discuss the barcode capabilities with the laboratory supervisor? List the barcode symbologies to be used, as well as any additional required functionality:	Yes ☐	No ☐
2. Inform the laboratory about sample containers available for use with the Atellica Solution System.		
Did you discuss the available sample containers for use with the Atellica Solution System?	Yes ☐	No ☐
3. Does the customer provide support for laboratory staff to have personal mobile device access to their network using a wireless access point? **Note**: The Atellica mobile web service requires the laboratory to provide their own wireless network access to use the feature.	Yes ☐	No ☐
4. Is cell phone usage permitted in the lab where the Atellica Solution is being installed?	Yes ☐	No ☐
If yes, is there cell phone coverage in the lab?	Yes ☐	No ☐
5. Is there an external printer already installed on the hospital network (WAN) to print reports for the Atellica Solution?	Yes ☐	No ☐
If Yes, record the printer model type and number (e.g. Lexmark MS310DN-110) and network information.		
Printer Model		
IP Address		
Subnet Mask		
Default Gateway		

6. Is there an Barcode label printer already installed on the hospital network (WAN) to print barcode labels for Atellica?	Yes ☐	No ☐
If Yes, record the printer model type and number (e.g. SATO CG212TT) and network information.		
Printer Model		
IP Address		
Subnet Mask		
Default Gateway		
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		
Comments:		

10.1.1 Actual Equipment Location

Refer to (➔ Space Requirements / Page 13) for the recommended installation layout and space requirements. Use the space below to sketch a proposed location of the system in the laboratory. Indicate the approximate room dimensions, doorways and door swing, and distances from the system to the water supply, liquid waste drain and electrical supply.

Fig. 15: Actual Equipment Location



10.1.2 Sample Container Requirements

Tab. 13 Sample Container Requirements - Primary Tubes

						Tube Support by Configuration[1]		
Item	Material	Cap Type	Size	Volume	Note if false bottom shape	SH	DL	SHC
Plain Top Tubes ranging 13-16 dia, 75-100 high	plastic or glass	None	Various	4-10 mL	NA	Y	Some	N
13mm x 75 mm primary tube	plastic or glass	None	13mm x 75mm	4-5 mL	NA	Y	Y	Y
13x75 Vacutainer® Hemogard - BD	plastic	safety	13mm x 75mm	3.5 mL	NA	Y	Y	Y
13x75 Vacutainer - BD	plastic	stopper	13mm x 75mm	3.5 mL	NA	Y	Y	Y
13x75 Vacuette® - Greiner	plastic	safety	13mm x 75mm	4 mL	NA	Y	Y	Y
13mm x 100mm primary tube	plastic or glass	None	13mm x 100mm	6-7 mL	NA	Y	Y	Y
13x100 Vacutainer Hemogard - BD	plastic	safety	13mm x 100mm	6 mL	NA	Y	Y	Y
13x100 Vacutainer - BD	plastic	stopper	13mm x 100mm	6 mL	NA	Y	Y	Y
13x100 Vacuette - Greiner	plastic	safety	13mm x 100mm	5 mL	NA	Y	Y	Y
16mm x 100mm primary tube	plastic or glass	None	16mm x 100mm	10 mL	NA	Y	Y	Y
16x100 Vacutainer Hemogard - BD	plastic	safety	16mm x 100mm	8.5 mL	NA	Y	Y	Y
16x100 Vacutainer glass - BD	glass	stopper	16mm x 100mm	10 mL	NA	Y	Y	Y
16x100 Vacutainer - BD	plastic	stopper	16mm x 100mm	10 mL	NA	Y	Y	Y
16x100 Vacuette - Greiner	plastic	safety	16mm x 100mm	9 mL	NA	Y	Y	Y

						Tube Support by Configuration[1]		
Item	Material	Cap Type	Size	Volume	Note if false bottom shape	SH	DL	SHC
Sarstedt S-Monovette 16mm x 92mm	plastic	screw cap	16mm x 92mm	9 mL	NA	Y	N	Y
Sarstedt S-Monovette 13mm x 90mm	plastic	screw cap	13mm x 90mm	4.9 mL	NA	Y	Y	Y
Sarstedt S-Monovette 15.3mm x 75mm	plastic	screw cap	15.3mm x 75mm	5.5 mL	NA	Y	N	Y
Sarstedt S-Monovette 15mm x 92mm	plastic	screw cap	15mm x 92mm	7.5 mL	NA	Y	Y	Y
Trinidad Calibration / QC Tube 12x75 glass tube	glass-borosilicate	none	12mm x 75mm	5 mL	NA	Y	Y	Y
Bio-rad Control Tubes	plastic	thread	NA	4 mL	NA	Y	Y	N

1. The Decapper supports plastic tubes with safety and screw (thread) cap types and round and syringe bottom shapes. Tubes not supported by the Decapper can be used on the system uncapped. The operator's guide covers specific tube support.

Tab. 14 Sample Container Requirements - Transfer Tubes

						Tube Support by Configuration		
Item	Material	Cap Type	Size	Volume	Bottom Shape	SH	DL	SHC
Small Transfer Tube (12mm)	plastic or glass	None	12mm x 75mm	5 mL	Round	Y	Y	Y
Large Transfer Tube (13mm)	plastic or glass	None	13mm x 100mm	9 mL	Round	Y	Y	Y
Large Transfer Tube (14mm)	plastic	None	14mm x 100mm	5 mL	Round	Y	N	Y
Large Transfer Tube (16mm)	plastic or glass	None	16mm x 100mm	10 mL	Round	Y	Y	Y

						Tube Support by Configuration		
Item	Material	Cap Type	Size	Volume	Bottom Shape	SH	DL	SHC
Large Transfer Tube (16mm)	plastic	None	16mm x 75mm	8 mL	Round	Y	N	Y
Transfer Tube (Sarstedt)[1]	plastic	screw cap	15.3mm x 92mm	10 mL	Round	Y	N	Y

1. Supported by Decapper

Tab. 15 Sample Container Requirements - Sample Cups

						Tube Support by Configuration		
Item	Material	Cap Type	Size	Volume	Bottom Shape	SH	DL	SHC
Atellica TTSC - Siemens 11069061	plastic	None	13mm x 26mm	1 mL	Conical	Y	Y	N
Atellica TTSC - Siemens 11069062	plastic	None	13mm x 30mm	2 mL	Conical	Y	Y	N

Vista Tubes not on Atellica: BD Vacutainer® Conventional Stopper (10mm x 65mm and 10mm x 50mm)

Tab. 16 Capillary Collection Containers

					Tube Support by Configuration		
Item	Material	Cap Type	Volume	Bottom Shape	SH	DL	SHC
Becton Dickinson Micro-tainer® 365967	plastic	stopper	1 mL	Conical	Y	N	N
Greiner MiniCollect® 450472	plastic	stopper	1 mL	Conical	Y	N	N
Greiner MiniCollect Com-plete	plastic	stopper	0.8 mL	Conical (false-bottom)	Y	N	N
Sarstedt Microvette® 20.1344	plastic	stopper	1 mL	Conical	Y	N	N

Tab. 17 False Bottom Tubes

						Tube Support by Configuration		
Item	Material	Cap Type	Size	Volume	Bottom Shape	SH	DL	SHC
15.3 x 92 False Bottom - Sarstedt 62.612	plastic	screw	15.3mm x 92mm	4 mL	Flat	Y	Y	N

10.1.3 Automation Requirements

Tab. 18 Automation Software/Firmware Versions Needed for Atellica Sample Handler Connect Connectivity to Aptio/FlexLab

Automation System		Minimum Software/Firmware Version
Aptio by Siemens (Aptio-1)		Aptio 9.0
Aptio by Inpeco (Aptio-2)	SMS (automation track)	Quebec 1 update
	DMS (Inpeco Middleware)	Jena 1.0.1 update
FlexLab	SMS (automation track)	Quebec 1 update
	DMS (Inpeco Middleware)	Jena 1.0.1

1. Does the site meet the above automation requirements for use with Atellica Sample Handler Connect?[1]	Yes ☐	No ☐
Comments:		
2. Will the Atellica system be connected to Aptio 1 or Aptio 2?	Aptio 1 ☐	Aptio 2 ☐
Preliminary Visit: Accepted ☐ Rejected ☐		
Comments:		
Final Visit: Accepted ☐ Rejected ☐		

Comments:

1. Atellica Decapper support is not provided with automation systems.

11.1 Notes / Comments

12.1 Changes to Previous Version

12.1.1 Version 13

Change No.	Changes
LFT0012830	**4. Environmental Requirements** ■ (➔ Customer Site / Page 16): Added a question on whether a Decapper is being added between analyzers to an existing installation, and if the response is Yes, to order new water and waste tubing.
LFT0012929	**5. Power Requirements** ■ (➔ Power Requirements / Page 23): Corrected the amperage value for Europe for the Decapper dedicated power receptacle.
LFT0012703	**8. Air Supply Requirements** ■ (➔ Air Supply Requirements / Page 31): Added a question on whether an in-house air supply system has a pressure regulator, pressure gauge and control valve to ensure appropriate air supply to one or more Decappers.
LFT0013183	**10. Other Requirements** ■ (➔ Other Requirements / Page 40): Added a statement to list the barcode symbologies to be used, as well as any additional required functionality, as part of the discussion with the laboratory supervisor about barcode capabilities.
LFT0012940	**Throughout** ■ Corrected check mark functionality. ■ Corrected broken links. No technical changes were made as part of these corrections.

12.1.2 Version 12

This document supersedes LDAT-000.835.02.01.02.

Change No.	Changes
LFT0011548	**3. Delivery Requirements** ■ (➔ Tab. 2 Page 9): updated all crated system weights except Decapper.
LFT0011695 CHG0046330	**4. Environmental Requirements** ■ (➔ Space Requirements / Page 13): added a note to this section regarding the EasyCalc tool, removed the configuration table because of the EasyCalc tool, and added updated and additional images for various Atellica Solution configurations.

Change No.	Changes
LFT0011970	**5. Power Requirements** ■ (➔ Power Requirements / Page 23): Added compressor power information. **7. Drain Requirements** ■ (➔ Drain Requirements / Page 30): Added compressor drain information. **8. Air Supply Requirements** ■ (➔ Air Supply Requirements / Page 31): Updated the value of the air pressure reading required for the Decapper.
LFT0011326	**9. Remote Connectivity Requirements** ■ (➔ Remote Connectivity Requirements / Page 36): added a note at the top of the section.

12.1.3 Version 11

Change No.	Changes
CHG0050758	**3. Delivery Information** ■ (➔ Delivery Information / Page 8): Updated to include Decapper specific delivery requirements. **4. Environmental Requirements** ■ System Specifications (➔ System Specifications / Page 12): Updated to include Decapper specific system requirements. ■ Site Requirements (➔ Site Requirements / Page 13): Updated to include Decapper specific site requirements ■ Customer Site (➔ Customer Site / Page 16): Updated to include Decapper specific customer site requirements. **5. Power Requirements** ■ (➔ Power Requirements / Page 23): Updated to include Decapper specific power requirements. **8. Air Supply Requirements** ■ (➔ Air Supply Requirements / Page 31): Added air supply requirements section for Decapper installations. **10. Other Requirements** ■ Sample Container Requirements (➔ Sample Container Requirements / Page 43): Added general information on Decapper tube specifications.

12.1.4 Version 10

Change No.	Changes
LFT0010052	**8. Remote Connectivity Requirements** ■ (➔ Remote Connectivity Requirements / Page 36): Updated the section to add notes related to potential conflicts between the customer and Atellica Solution network schemas.
CHG0055019	**9. Other Requirements** ■ (➔ Sample Container Requirements / Page 43): added (➔ Tab. 16 Page 45) and (➔ Tab. 17 Page 46).

12.1.5 Version 09

Change No.	Changes
CHG0052462	**9. Other Requirements** ■ (➔ Sample Container Requirements / Page 43): Added Direct Load support for Bio-Rad control tubes and Atellica TTSC, and removed VSSC.

12.1.6 Version 08

- Added a second note to the “Delivery Information“ section (➔ Delivery Information / Page 8).
- Updated item #2 (0.22 micron water filters) in the “Customer Site” sub-section (➔ Customer Site / Page 28) of the “Water Requirements” section.

12.1.7 Version 07

- Added “string and tape” and “laser level” to the list of materials (➔ Materials / Page 5).
- Corrected the weights of the CH and IM analyzers and the SH in (➔ Tab. 1 Page 8).
- Separated “specifications” (thermal and noise) from “requirements” (space) in the “Environmental Requirements” section (➔ Environmental Requirements / Page 12).
- Added SHC thermal output to the “Thermal Output Specifications“ section (➔ Thermal Output Specifications / Page 12).
- Added (➔ Space Requirements / Page 13).
- Changed “Is the floor acceptable?” to “Can the floor support the load of the configuration?” in step 5 of the “Environmental Requirements” section (➔ Customer Site / Page 16).
- Updated the “Determining the Pitch of the Floor” section (➔ Determine the Pitch of the Floor / Page 18) for clarity.

- Updated or removed the following UPS specifications:

Action	Specification	Location
Updated	Input connection	(➔ Tab. 8 Page 24)
Removed	Input capacity	
Updated	Output Voltage THD	
Updated	Frequency Regulation	
Updated	Output Connections	
Updated	Recharge Time	(➔ Tab. 9 Page 25)
Updated	EMC Standards	(➔ Tab. 11 Page 25)

- Added a new question 5 to the “Power Requirements” section (➔ Customer Site / Page 26).
- Changed deionized (DI) water to special reagent grade water (SRW) in the “Water Requirements“ section (➔ Water Requirements / Page 28).
- Updated text regarding 0.22 micron filter in the “Water Requirements - Customer Site“ section (➔ Customer Site / Page 28).
- Added a link to the “Water Quality Testing” document in the “Water Requirements” section (➔ Water Requirements / Page 28).
- Added (➔ Fig. 15 Page 42) to provide additional space for drawing the actual equipment location.

12.1.8 Version 06

- Editorial change.

12.1.9 Version 05

- Updated the clearance in the front of an SH in the “Space Requirements“ section (➔ Space Requirements / Page 13).
- Updated thermal output information (➔ Thermal Output Specifications / Page 12) to include “Idle” thermal output.
- Added information regarding the LIS network settings in the “Remote Connectivity Requirements“ section (➔ Remote Connectivity Requirements / Page 36).

12.1.10 Version 04

- Added information about load per foot to the “Environmental Requirements - Customer Site” section (➔ Customer Site / Page 16).

- Added the “Distances Between Feet“ section (➔ Distances Between Feet / Page 19).

12.1.11 Version 03

- Updated the information below step 5 of the “Environmental Requirements - Customer Site“ section (➔ Customer Site / Page 16) to include a calculation of weight/area for each module.

12.1.12 Version 02

- Initial publication to CB-DOC.

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