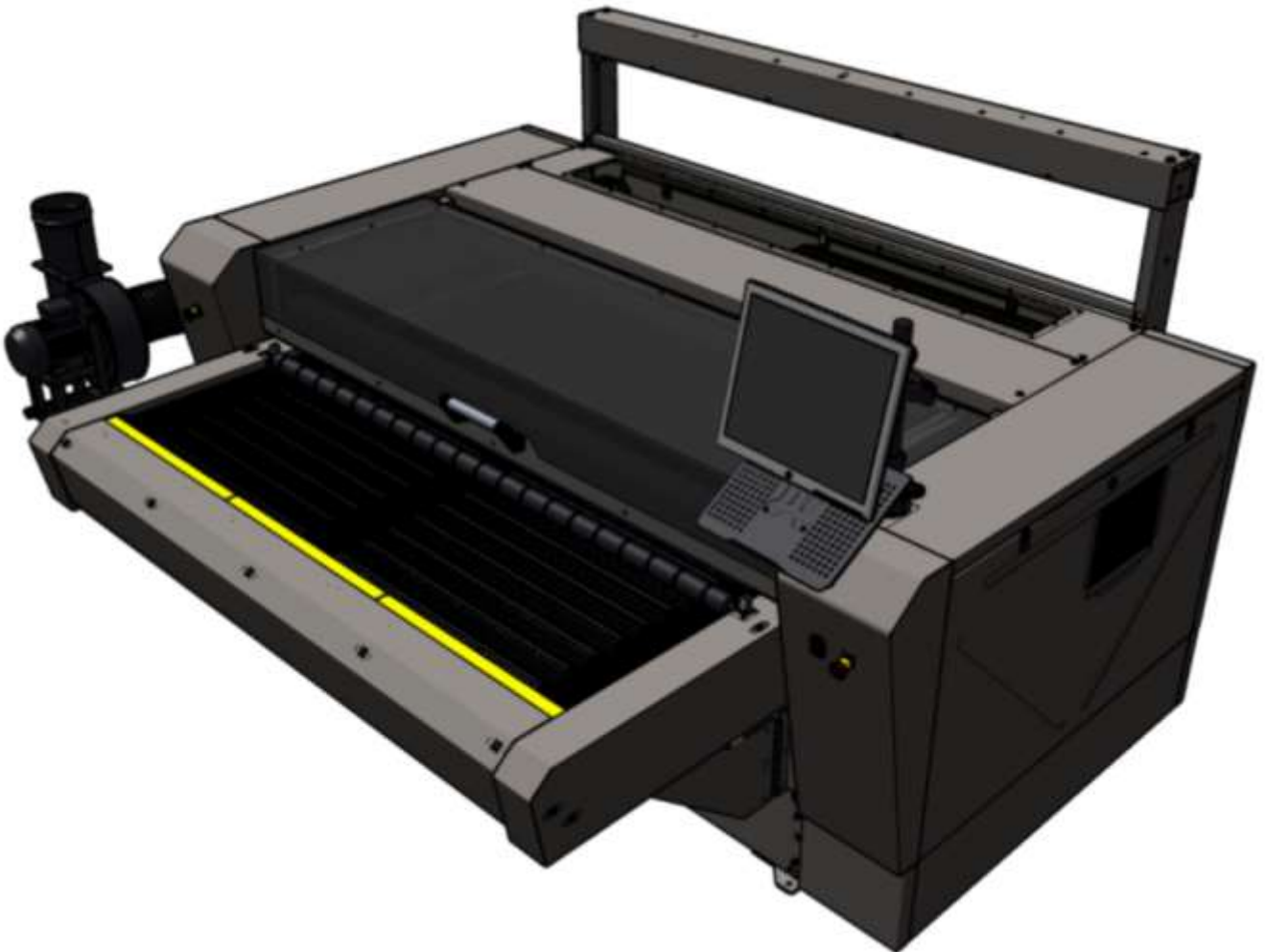


## Site Preparation Document for L1810-26

---

# Instructions and Sign-off





## Version overview

Version	Date	Reason for modification	Author
001	13/04/2022	Creation document	Nico
002	29/092023	Update ver 25, small changes and additions	Nico
003	17/06/2024	Update ver 26	Nico
003b	8/07/2024	Chiller updated	Nico

## Notice

Due to continuing research and product improvements, Summa reserves the right to modify the information contained in this document at any time without prior notice. Unauthorized copying, modification, distribution, or display is prohibited. All rights reserved.

Copyright © Summa



## 1 CONTENTS OF THIS DOCUMENT

This document explains how to prepare the customer site for the installation of the Laser Cutter and gives information regarding transportation and connection. At the end of this document, official forms are included that provide an overview of the installation site, system configuration and end-user workflow. This information will facilitate the installation.

1	Contents of this document.....	3
2	Site Preparation.....	4
2.1	Shipping, Arrival and Unpacking .....	5
2.2	Floorplan .....	6
2.3	Connections and peripherals .....	8
2.3.1	Computer Connection.....	8
2.3.2	Electrical connection .....	9
2.3.3	Pneumatic connection .....	10
2.3.4	Chiller .....	11
3	Pages for completion and signature.....	14
3.1	Preparational checklist .....	14
3.2	Extra Info.....	14
3.3	Certification.....	15
4	Reference manuals.....	15
5	Safety instructions .....	16
5.1	L Series: Safety precautions - Précautions de sécurité.....	16

## 2 SITE PREPARATION

Prior to installation of the laser cutter, a couple of things need to be prepared to ensure smooth installation. The site must also meet certain requirements, see the checklist on page 14.



---

**NOTE:** Before installation can be scheduled, the customer site needs to be prepared. The customer must check and tick all the points on the checklist (see p. 14), complete where necessary and return this document signed to the installation engineer.

---



---

**NOTE:** An installation completion document is available. We recommend using this document, also after the installation of the flatbed. Make sure each party has a copy of the completely filled-in document.

---



---

**ATTENTION:** The amount of time the engineer will spend on-site for the installation is limited. Proper site preparation is crucial for a successful installation. Any delay due to missing machinery, options, accessories, people, or other installation requirements will be added to the on-site time and will be charged extra.

---

## 2.1 Shipping, Arrival and Unpacking

The machine itself is delivered in one crate. Any optional parts will come in additional crates/boxes. The crate itself should be handled with a forklift or a hand pallet truck. There are several options for transporting the crate. Use the table below to determine the correct lifting capacity of the transportation vehicles.

- The crate may need to be transported with two pallet trucks at each side, otherwise doorways need to be up to 3.2m wide. The width of the outside and inside corridors/doorways should be at least 3.2m. Wider widths are needed for turning long crates.
- There is a clear path to the installation area (so no steps).
- For additional safety, make sure a CO2 fire extinguisher is present and easily accessible.

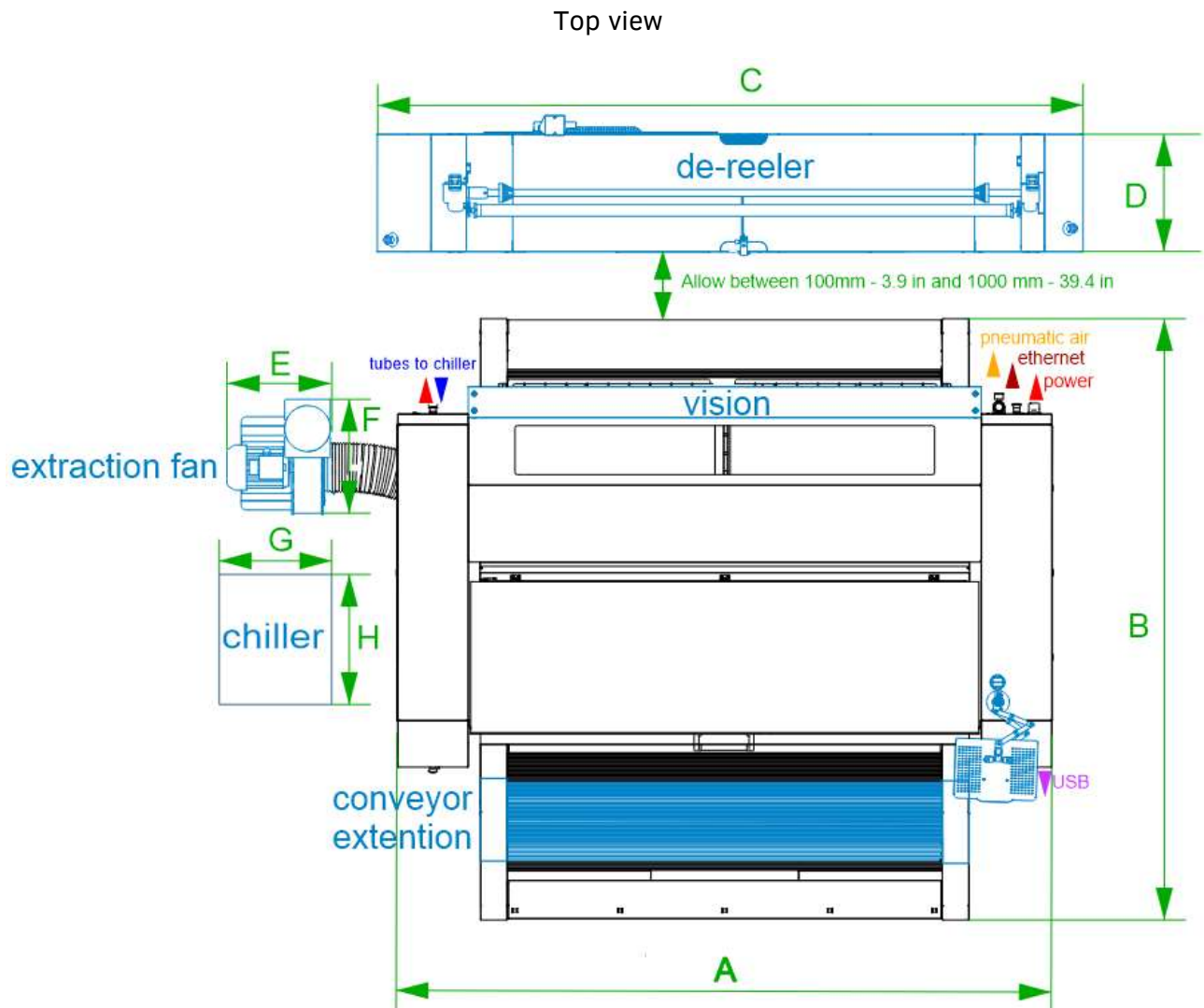
L1810-26 (packed)		
Description	Dimensions (w x d x h)*	Weight*
Main unit	3070 x 2290 x 1600 mm	1285 kg
Vision option	3015 x 550 x 415 mm	90 kg
Standard Unwinder	3170 x 1540 x 970 mm	447 kg
Edge Detect Unwinder	3170 x 1540 x 970 mm	447 kg
Additional parts: <ul style="list-style-type: none"> <li>• Flexible hoses</li> <li>• Toolbox</li> <li>• Extraction pump*</li> <li>• Water pipes*</li> <li>• Chiller*</li> </ul>	2200 x 1000 x 1330 mm	332 kg
Set of 2 Bofa filter units	1500 x 1150 x 1500 mm	400 kg

## 2.2 Floorplan

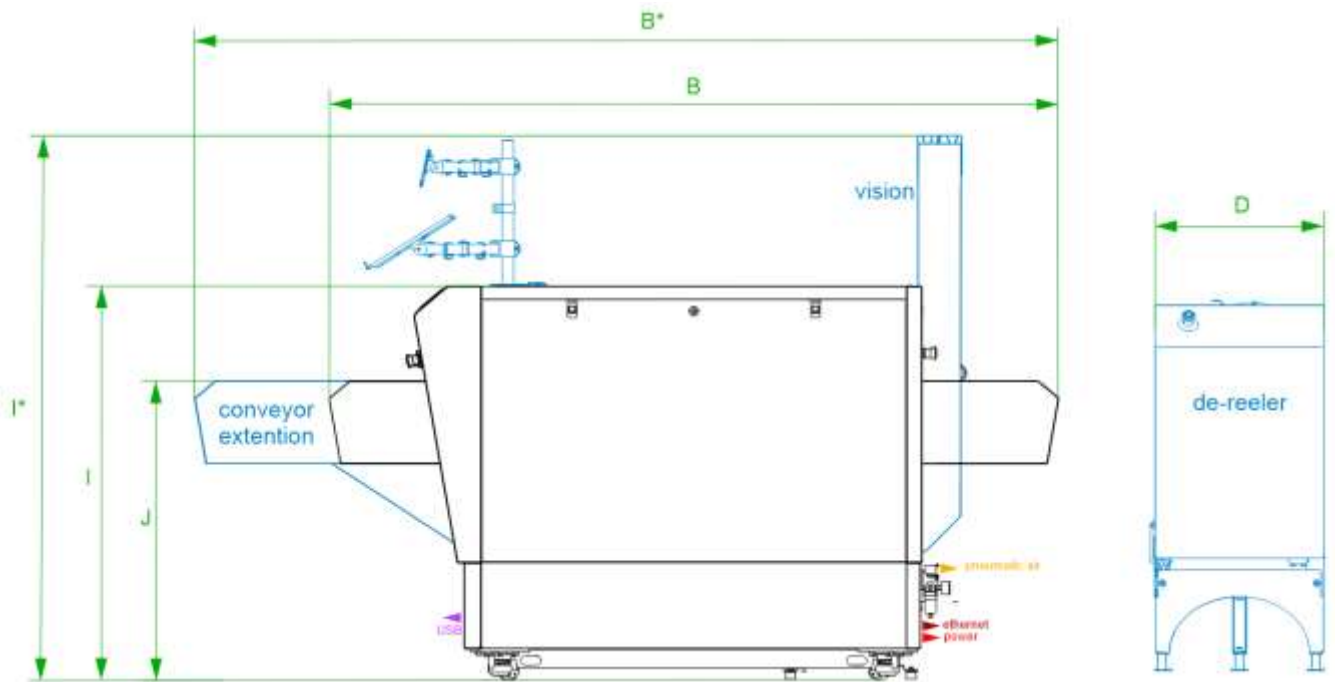
Use the floorplan to determine if the installation area and/or positioning is suited for the machine. Black marked is the main standard unit. Options are marked in blue.

- A solid and level concrete surface, preferably antistatic, is recommended.
- Wooden frames/floors/constructions are not suitable.
- The height difference over the entire installation area cannot be more than 12 mm (0,5 inch).
- Keep 1 to 2 m clear on one side of the machine to make it easier to work during installation.
- Without packaging, the laser cutter weighs **800 kg**.

Black lines are the main standard unit. Options are marked in blue.

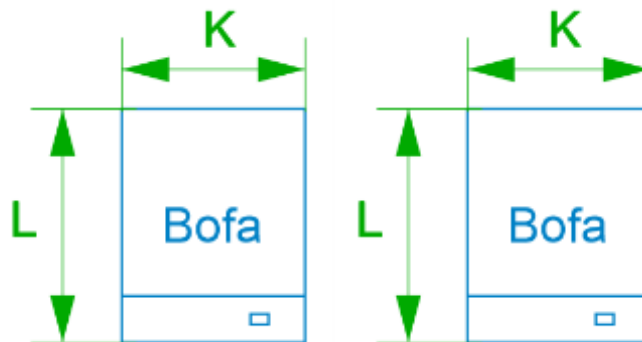


Right side view



If outlet extraction is not possible the extraction fan must be replaced with a fume extraction system (Bofa): 2 x Bofa 1000 IQ are needed:

Top view



Reference	Description	Dimension (mm)
A	Width of the main unit	2805
B	Depth without conveyor extension	2175
B*	Depth with conveyor extension*	2575
C	Width of the standard Unwinder*	3022
	Width of the Edge Detect Unwinder*	3022
D	Depth of the standard Unwinder*	560
	Depth of the Edge Detect Unwinder*	560
E	Width of the Extraction fan*	470
F	Depth of the Extraction fan*	450
G	Width of the Chiller*	520
H	Depth of the Chiller*	620
I	Height of the basic unit (no vision)	1172
I*	Height of the unit with vision option	1623
J	Height of the bed	890
K	Width Bofa	615
L	Depth Bofa	790

## 2.3 Connections and peripherals

The laser cutter has three connections:

- electrical (one power cord for both vacuum/extraction pumps and laser cutter),
- computer connections
  - USB connection (used for units without vision)
  - Ethernet (used for units with vision)
- compressed air.

### 2.3.1 Computer Connection

A preconfigured build in computer is only delivered/included with the laser cutter in case the optional Vision system is ordered. The Basic unit L1810-2 does not contain a PC.

#### 2.3.1.1 Basic unit without vision:

A dedicated pc to control the unit need to be available. The pc need to be positioned at the front right side (foresee extra space) and connected with the USB connector at the front of the unit. The cable length of 3 meter cannot be extended (not passive/active). Choose a PC or laptop with hardware components that are up to date with the today standards.

- **OS:** Windows 11
- **Screen:** Full HD
- **USB:** At least 1 free USB connection and an optional one



### 2.3.1.2 Unit with vision

A pc and keyboard/screen standard are included in the vision option. The Pc is positioned inside the unit. The power for this integrated pc comes from the main unit. Ethernet is routed to a ethernet connector at the rear side of the unit.

### 2.3.2 Electrical connection

The electrical cable and wall socket are **NOT SUPPLIED** with the laser cutter and must be provided by the end user. The core diameter needs to meet the local power regulations according the below information.

The wall socket and cable plug need to be IEC60309 standard.  
The connection to the mains may also be done with an electric wall box.

Power requirements:

The main unit power requirements depend on the chosen laser tube and options

Laser cutter	Model	Cooling	Voltage	MCB	Max power	AVG power
50 W	ULR 50	Air	3x400V+N	16 A	7 kW	3.5 kW
100 W	ULR 100	Air	3x400V+N	25 A	8 kW	4 kW
120 W	SR10i	Water	3x400V+N	25 A	10 kW	5 kW
250 W	SR25i	Water	3x400V+N	32 A	15 kW	7.5 kW

Power cable:

- Length: Distance between power switch of the machine and wall socket + 2m (6 feet)
- 5 cores (3 x L + N + PE), according to the available power.



**ATTENTION:** Be sure to check the regional electrical requirement for the type of wall socket and plug, and fuse for the wall socket or electrical wall box.

## Power of the peripherals

Unit	Voltage	MCB
chiller	220-240 VAC	16 A
Standard Unwinder	<i>Power from unit</i>	
High end Unwinder	<i>Power from unit</i>	
PC + monitor	standard power socket* - <i>Power from unit**</i>	
2X Bofa 1000 IQ	2X 220-240V	2X 16A
Extraction fan	<i>Power from unit</i>	

\* Basic unit without vision option.

\*\* Unit with vision ( build in PC)

The connection to the mains may also be done with an electric wall box.



**ATTENTION:** Be sure to check the regional electrical requirement for the type of wall socket and plug, and fuse for the wall socket or electrical wall box.

### 2.3.3 Pneumatic connection

The unit is delivered with a one touch pneumatic fitting outer diameter 10 mm to connect to the compressed air supply. The end user must provide the connection parts.

The length of the tube should be the distance between the power switch of the machine and the wall socket + 2 m (6 feet).

- Compressed air supply: max 4 bar (60 PSI)  
@ 300 l/min (4.1 cfm)
- Standard operating air supply: 4 bar (60 PSI)  
@ 30 l/min (1.1 cfm)

The air should be clean and dry, and filtered to 15 microns (Class 4 ISO 8573-1), which usually means an additional compressed air dryer is required.

Typical air usage of a laser cutting system:

Inlet pressure (bar)	2 mm nozzle	
	l/min	l/h
0.5	45.4	2724
1	64.2	3852
1.5	80.3	4815
2	96.3	5778
2.5	112.4	6741
3	128.4	7704

Connection:

- 1: 10 mm connection to the unit
- 2: connection to the existing installation (so it might require another connection type than the one on the picture)



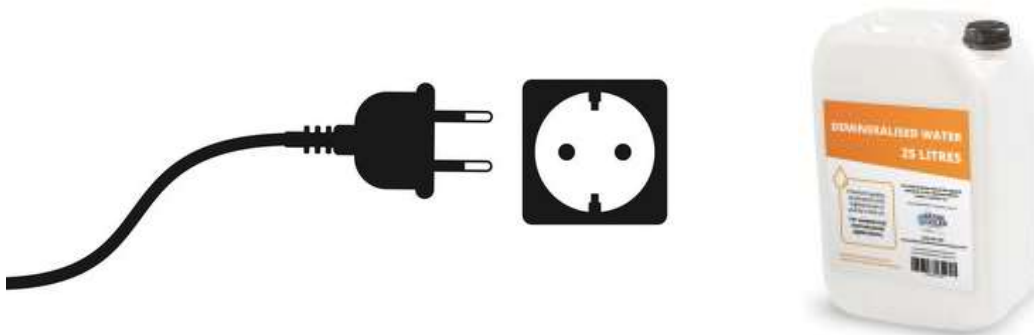
**NOTE:** Type in “one touch pneumatic fitting for metric tubes” in your search engine to find the correct fitting easier.

### 2.3.4 Chiller

The Summa chiller is a mandatory peripheral device that is required when a water-cooled laser (120W or 250W) is installed with the unit.

A chiller is a critical device for the function of the chiller. Only Summa chillers are allowed to be used to be able guarantee the warranty on the water-laser tube.

The location of the chiller has to be at the left side of the unit. **25 liter of demineralized water** is needed for the chiller. The length of the water tubes is 5 meter and may not be extended. A standard power socket is applicable.



**ATTENTION: DO NOT USE TAP WATER.** Only Demineralized water is suitable.



**Summa nv**  
Rochesterlaan 6  
8470 Gistel  
Belgium

#### 2.3.4.1 Unwinder

The Unwinder is connected to the main unit and does not need a power socket

#### 2.3.4.2 Extraction fan or Bofa

- The outlet extraction fan is connected to the main unit with a flexible hose of diameter 200mm. The length of the hose is 3.3 meters. The power for the fan does not need a power socket, it is connected with a power socket to the main unit.
- 2 units BOFA 1000 IQ: fume extraction system needs 2 power sockets

#### 2.3.4.3 Vision

The vision option contains. This option need to be buildup onsite. Check the floorplan for dimensions:

- The vision gantry with 3 integrated cameras
- A pc integrated in the unit
- A screen and keyboard stand

#### 2.3.4.4 Conveyor extension

This option add an extra 40 cm extra space at the front part of the conveyor. This option need to be buildup onsite. Check the floorplan for dimensions.

## 3 PAGES FOR COMPLETION AND SIGNATURE

### 3.1 Preparational checklist

Machine model to be installed: \_\_\_\_\_

- The driver of the truck can unload the crate, which can be moved inside.
- A forklift truck or pallet truck(s) with the appropriate lifting capacity will be available (lifting capacity 2000 kg, fork length min 200 cm).
- Two people are available for a successful installation.
- There is a clear path to the installation area (so no steps, stairs, radiators) and doorways are wide enough.
- The installation area is free. It is recommended to mark this area on the floor.
- The power main connection or the parts to connect to the mains are available. Someone with sufficient knowledge of the local requirements for electrical installation is available or has prepared the connection. Choose one of the options below:
  - 3-phase power supply and type: \_\_\_\_\_
- The compressed air connection or the parts to connect to compressed air are available.
- 25 Liter of demineralized water for the chiller is available in case of a water-cooled laser tube
- The future operator of the cutter is available during installation and entire training.
- The environment complies with the requirements for operating the machine.
- A level, clean and solid floor area is used for the machine location.
- Room around the machine location is sufficient for installation.
- Room around the machine is sufficient for all the peripherals, loading of materials/rolls and future maintenance of the machine.
- The environment complies with the requirements for operating the machine:
  - The area is well ventilated.
  - A CO2 fire extinguisher is present.
- 

### 3.2 Extra Info

Software used:

- Operating system: \_\_\_\_\_
- Designing: \_\_\_\_\_



- RIP: \_\_\_\_\_

Extra information:

---

---

---

### 3.3 Certification

I hereby declare that all preparatory work on site has been completed and that the necessary parts/tools and people will be available during installation and training.

Company name \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

## 4 REFERENCE MANUALS

All information for a successful installation you find on our Knowledge base [support.summa.com](http://support.summa.com)  
I is mandatory to download and use the latest versions of the manuals:

- Site preparation document
- Installation manual
- User manual

## 5 SAFETY INSTRUCTIONS

### 5.1 L Series: Safety precautions - Précautions de sécurité.

---

#### Caution

Servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not open the equipment and do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Unplug this equipment when not used for an extended period of time.



#### Attention

Les instructions d'entretien sont réservées au personnel d'entretien qualifié. Pour réduire le risque d'électrocution, n'ouvrez pas l'appareil et n'effectuez aucune réparation autre que celle décrite dans le mode d'emploi, sauf si vous êtes qualifié pour le faire. Débranchez cet équipement lorsqu'il n'est pas utilisé pendant une période prolongée.

---

#### Caution

Class 1 Laser Product.  
Class 4 invisible laser radiation when open.  
Avoid eye or skin exposure to direct or scattered radiation.  
Class 2 laser pointer. Do not stare into the beam.



#### Attention

Produit laser de classe 1.  
Rayonnement laser invisible de classe 4 lors de l'ouverture.  
Évitez toute exposition des yeux ou de la peau aux rayonnements directs ou diffus.  
Pointeur laser de classe 2. Ne pas regarder directement le faisceau.

---

#### Caution

Moving parts. Risk of trapping. Keep hands, clothing, jewelry, and hair away.



#### Attention

Pièces mobiles. Évitez de toucher les pièces mobiles et de pénétrer dans la zone de coupe avec les mains, les vêtements, les bijoux ou les cheveux.

---



---

**Caution**

This equipment should only be used in a well ventilated area.  
Do not cover ventilation openings.  
Periodic maintenance required.  
Only use a CO<sub>2</sub> fire extinguisher on this equipment.  
Compressed air hazard. Ensure that the air supply to the machine is disabled before disconnecting tubes.

**Attention**

Cet équipement ne doit être utilisé que dans un endroit bien ventilé.  
Ne pas couvrir les ouvertures de ventilation.  
Un entretien périodique est nécessaire.  
N'utilisez qu'un extincteur au CO<sub>2</sub> sur cet équipement.  
Risque lié à l'air comprimé. S'assurer que l'alimentation en air de la machine est désactivée avant de débrancher les tubes.

---

**Caution**

Observe precautions for handling electrostatic sensitive devices.

**Attention**

Respectez les précautions à prendre pour la manipulation des appareils sensibles à l'électricité statique.



Connection point protective earthing / grounding conductor.

Point de connexion de la terre de protection / du conducteur de mise à la terre.

---