

# Pre-Delivery Guide

Please read before operating

**HALO**  
S P A S

|           |  |          |
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# 1. INSTALLATION

## 1.1. PREPARING THE FOUNDATION

The foundation plays a pivotal role in ensuring the longevity of your spa. Surfaces such as grass, sand, pebble, or dirt are unsuitable. Utilising these as a foundation can lead to damages, including distortions or cracks in the shell, which subsequently voids your spa's warranty.

Your chosen foundation should provide even support for the spa and have the strength to sustain a load of at least 1000kg/m<sup>2</sup>. Such precautions prevent issues like the spa shifting or settling post-installation, which could otherwise place undue stress on the shell.

When deciding between a concrete slab and timber decking, Halo Spas strongly advises seeking the advice and services of a professional contractor. Proper foundation preparation is critical, and it is the owner's responsibility to ensure the spa is correctly installed.

Please refer to the table below for the dimensions and approximate filled weights of various Halo Spa models:

| Model        | Dimensions           | Dry Weight | Filled Weight |
|--------------|----------------------|------------|---------------|
| Halo 4.5     | 4470 x 2300 x 1400mm | 900kg      | 6900kg        |
| Halo 4.5 Max | 4470 x 2300 x 1400mm | 950kg      | 6950kg        |
| Halo 5.8     | 5830 x 2300 x 1400mm | 1100kg     | 8300kg        |
| Halo 5.8 Max | 5830 x 2300 x 1400mm | 1150kg     | 8350kg        |
| Halo 2.3D    | 2300 x 2300 x 900mm  | 280kg      | 1750kg        |
| Halo 2.3S    | 2300 x 2300 x 900mm  | 280kg      | 1810kg        |
| Halo 2.1D    | 2050 x 2050 x 900mm  | 240kg      | 1450kg        |
| Halo 2.1S    | 2050 x 2050 x 900mm  | 240kg      | 1500kg        |
| Halo 1.6     | 1600 x 2050 x 900mm  | 190kg      | 1105kg        |

When planning foundation requirements, always factor in the weight of occupants in addition to the spa's filled weight.

NOTE: Damage due to insufficient or incorrect foundation support is not covered by the Halo Spas Warranty. It is incumbent upon the spa owner to provide an adequate foundation for the spa.

### 1.1.1 Concrete Slab

A reinforced concrete slab is the recommended foundation for your spa. This must be a flat and sturdy surface that is able to support your spa evenly. Below are the guidelines for constructing the concrete slab.

- Base: Use crushed rock beneath the slab, compacted well, to a minimum of 65 kPa of pressure.
- Thickness: The slab should be at least 100mm thick.
- Reinforcement: Use two layers of steel mesh reinforcement (SL82) within the slab for added strength.
- Concrete Quality: Use concrete with a strength rating of F'c=25 MPa, and make sure there's a 30mm cover of concrete over the mesh.
- Size: Refer to slab engineering drawing in section 4.1.6 *Slab Specifications*. (for swim spa only)

NOTE: These are general guidelines, and it's essential to hire a licensed contractor or qualified engineer to ensure the slab meets these specifications and any local building codes.

### 1.1.2 Timber Decking

Timber decking can either surround your spa or serve as its primary foundation. Regardless of the choice, it's vital to emphasise the importance of planning, structural stability, and accessibility for maintenance.

## Decking that Surrounds the Spa

For those considering a timber deck aesthetic around their spa:

- **Accessibility for Maintenance:** Always design with maintenance in mind. Ensure that you grant unhindered access to the QuickLock™ door panels and maintain the recommended clearance on all sides. This accessibility is essential for routine upkeep and servicing, helping to avoid complications and potential future costs.
- **Underlying Foundation:** Beneath the spa, a reinforced concrete slab (as detailed above) is strongly recommended. It offers the necessary stability for the spa's occupied weight, while the timber decking contributes to the overall style.

## Decking as the Primary Foundation for the Spa

Given the significant weight a filled spa carries, especially when in use, it's advised to consult with a structural engineer if you're opting for timber decking as the main foundation. Their expertise will ensure your decking can safely bear the load. The deck's design must support a load of at least 1000kg/m<sup>2</sup>, with centre supports installed to uphold the centre of the spa.

### 1.1.3 Indoor Installations

#### Flooring Considerations

- **Water-Resistant Flooring:** The floor beneath the spa should be specifically chosen with water-resistance in mind. It's vital to select a type of flooring that won't be compromised or damaged by water, as regular use and maintenance of the spa will result in occasional splashes or overflows.
- **Drainage System:** Beyond the flooring type, an adequate drainage system should be considered to ensure any water overflow, splashes, or spills are promptly and efficiently managed, preventing water damage and ensuring safety. Consider installing floor drains or integrating a slope for water to flow towards a drain.

#### Additional Considerations

- **Load Bearing Capacity:** Even when indoors, the structural integrity of the flooring beneath the spa cannot be overlooked. The foundation must support a load of at least 1000kg/m<sup>2</sup>. Before installing, consult with a building engineer to verify that the intended location meets this requirement.
- **Ventilation Considerations:** spas naturally increase the humidity of the surrounding environment. To combat this, ensure the installation room has adequate ventilation. Consider the integration of exhaust fans, dehumidifiers, or a HVAC system tailored to handle increased moisture levels.

NOTE: Halo Spas will not be held responsible for water damage or any adverse effects resulting from placing the spa in surroundings that haven't been appropriately prepared. Always ensure that every aspect of the indoor installation adheres to recommended guidelines and seek professional advice where necessary.

### 1.1.4 Eco Heating System or Other External Heat Pumps

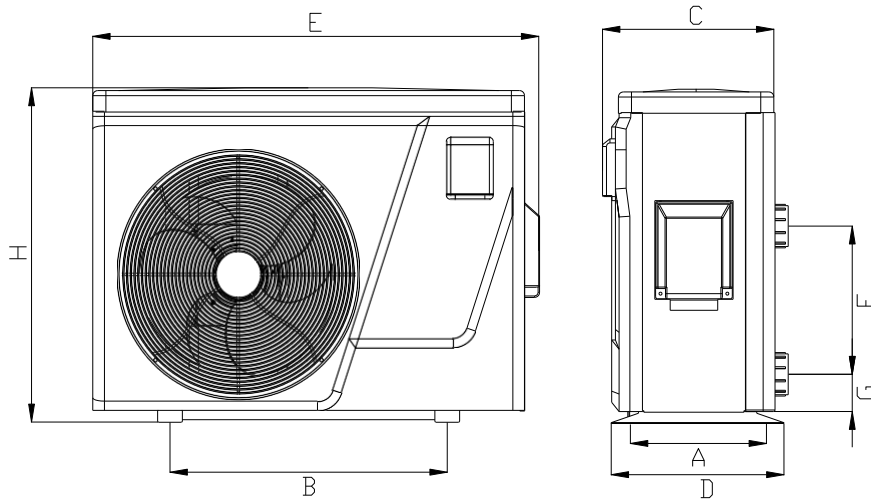
For maximum stability and performance, install the heat pump on a flat, level concrete slab. As you prepare the foundation for your spa, consider making provisions for the heat pump the same time.

- **Location:** Place the heat pump outdoors, separate from the spa cabinet. Ensure it isn't located in a confined space to prevent air recycling. Avoid having the fan face windows, walls, or areas frequented by people or animals. Shield the pump from prevailing winds and keep it away from pollutants, dust, or debris. While proximity to the spa is important, it should be no closer than 500mm. The optimal maximum distance is 3 meters.
- **Elevation:** The slab should be raised to prevent water accumulation around the heat pump's base and ensure adequate fall for the condensate drain pipework to divert condensation away from the heat pump.
- **Anti-vibration Mounts:** Use these mounts when installing the heat pump on its base. They effectively minimise noise and reduce wear on the unit.
- **Size & Stability:** The concrete base should be substantial both in dimensions and weight to anchor the heat pump securely.

Chilli 9kW Inverter Heat Pump Dimensions (Supplied with the Eco Heating System).

| A     | B     | C     | D     | E     | F     | G    | H     |
|-------|-------|-------|-------|-------|-------|------|-------|
| 324mm | 560mm | 347mm | 349mm | 903mm | 250mm | 74mm | 654mm |

Above data is subject to modification without notice.



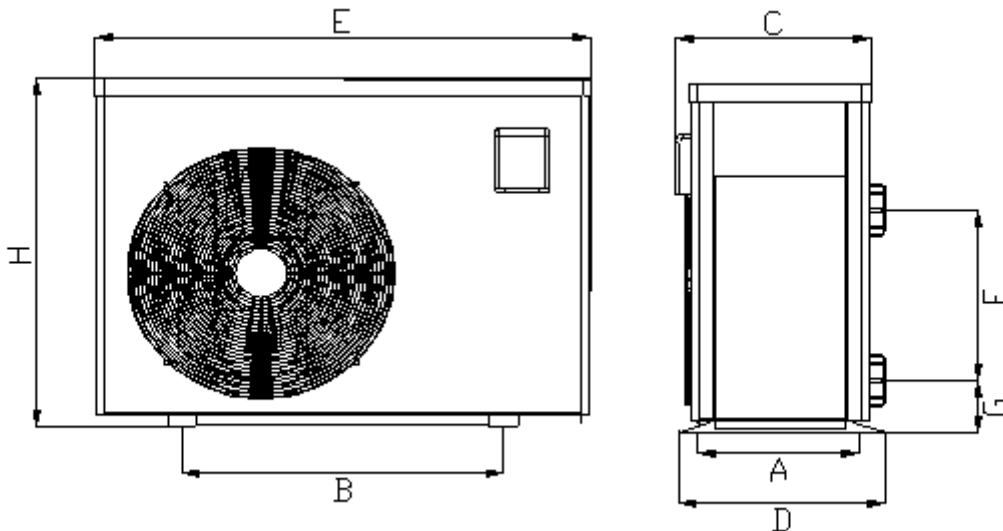
[Figure 1.1.4a]

Note: The figures above are the specification diagram of the heat pump, for technician's installation and layout reference only.  
The product is subject to adjustment periodically for improvement without further notice.

Chilli 5kW Inverter Heat Pump Dimensions (Supplied with the Eco Heating System).

| A     | B     | C     | D     | E     | F     | G    | H     |
|-------|-------|-------|-------|-------|-------|------|-------|
| 334mm | 428mm | 318mm | 359mm | 682mm | 280mm | 74mm | 598mm |

Above data is subject to modification without notice.






[Figure 1.1.4b]

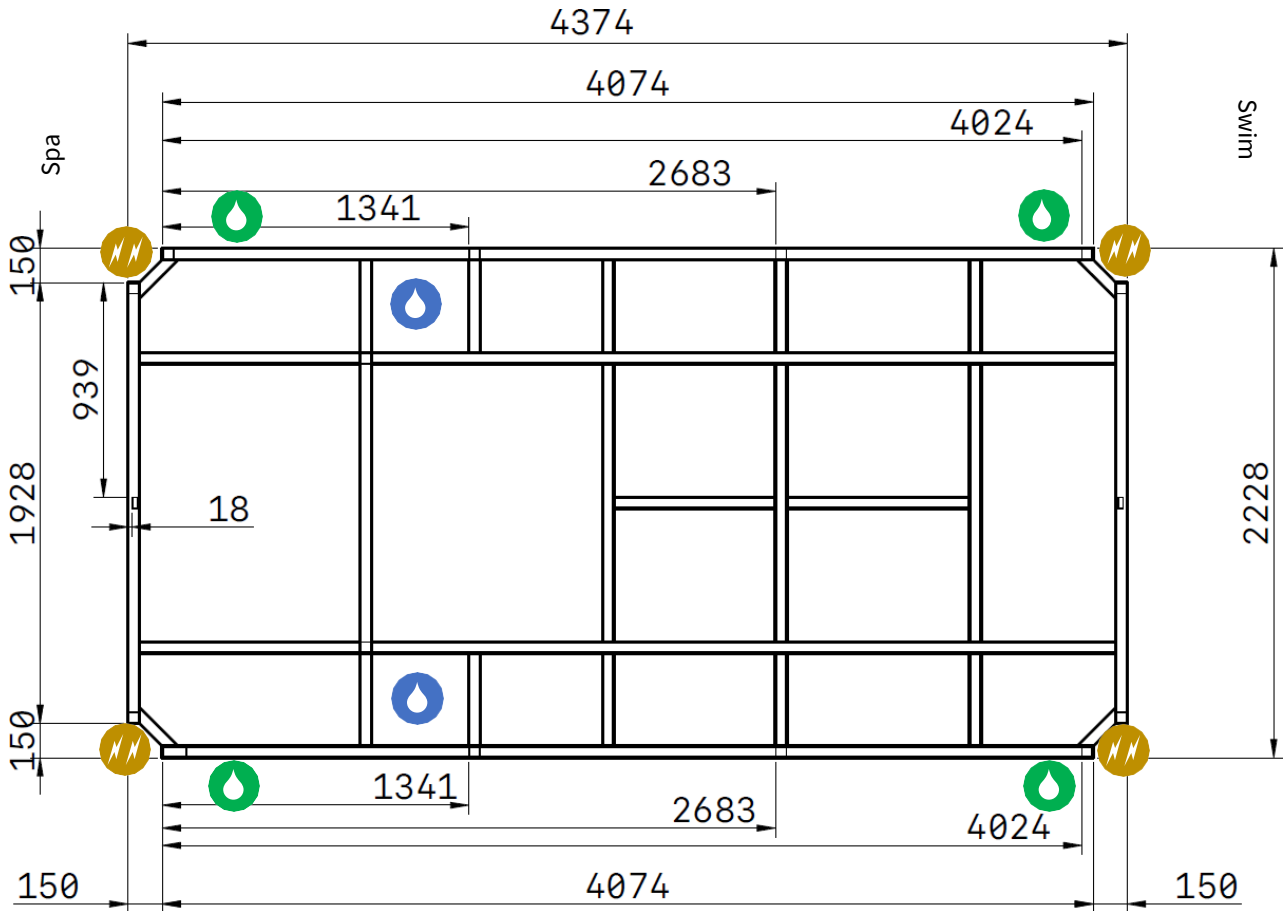
Note: The figures above are the specification diagram of the heat pump, for technician's installation and layout reference only.  
The product is subject to adjustment periodically for improvement without further notice.

### 1.1.5 Incorporating Services into the Foundation

When constructing the foundation such as a concrete slab, factor in the routing of both the power supply and the heat pump plumbing. Refer to the drawings below which highlight the access points within the swim spa frame. It's essential to integrate these points into the foundation design. Before beginning foundation construction, consult with your electrician to ensure all conduit specifications and other prerequisites are addressed.

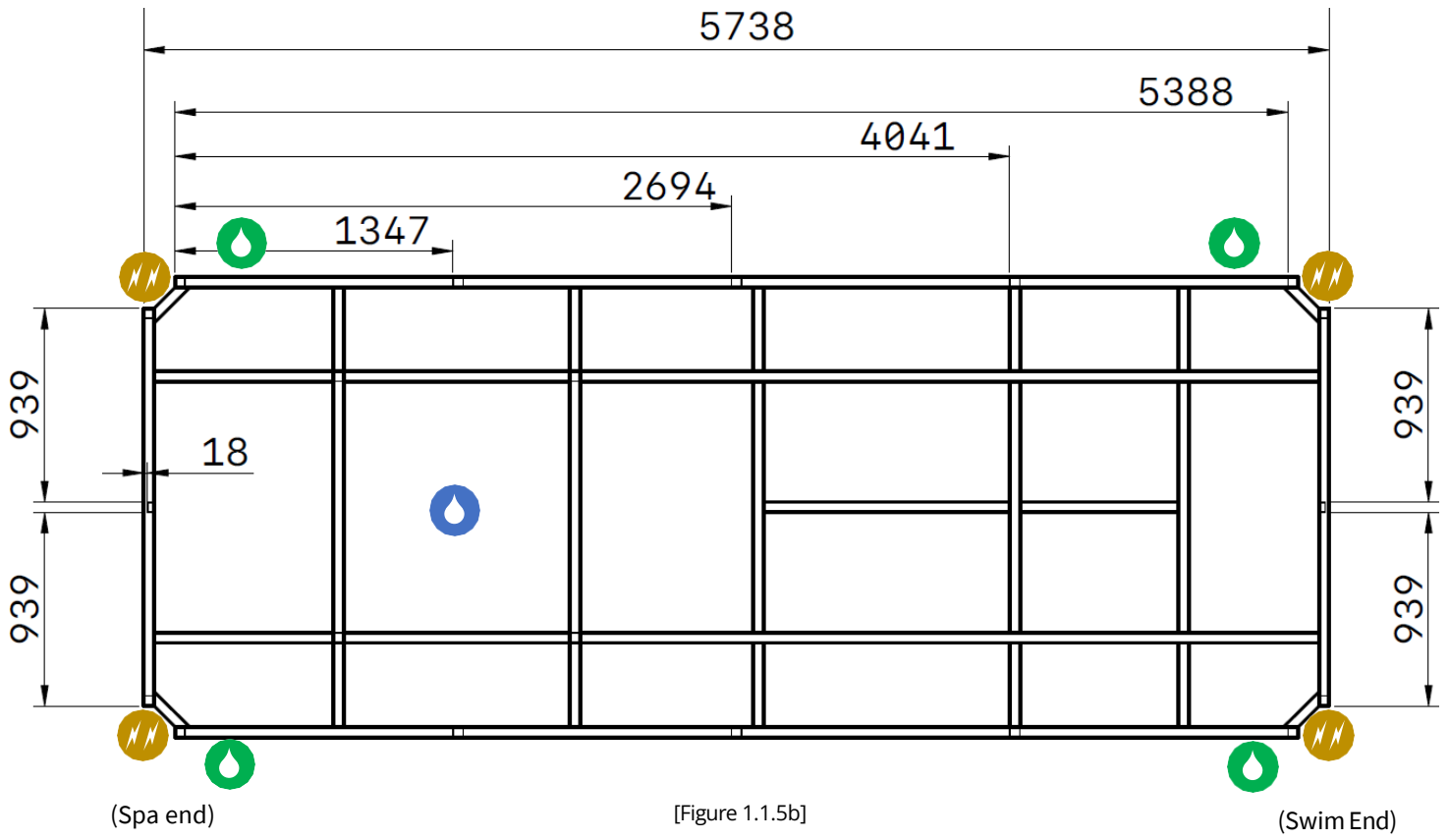
 Power Supply Access  Heat Pump Plumbing Access (through base)  Heat Pump Plumbing Access (through QuickLock™ panel)

#### Halo 4.5 Service Access Points

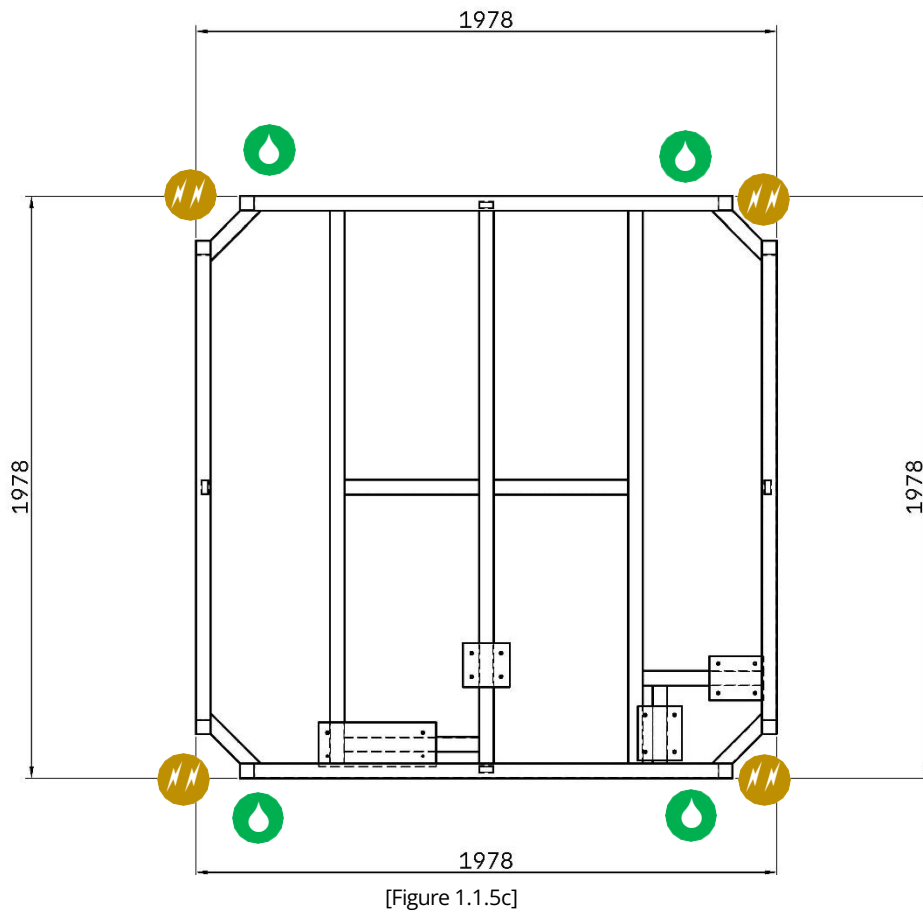


[Figure 1.1.5a]

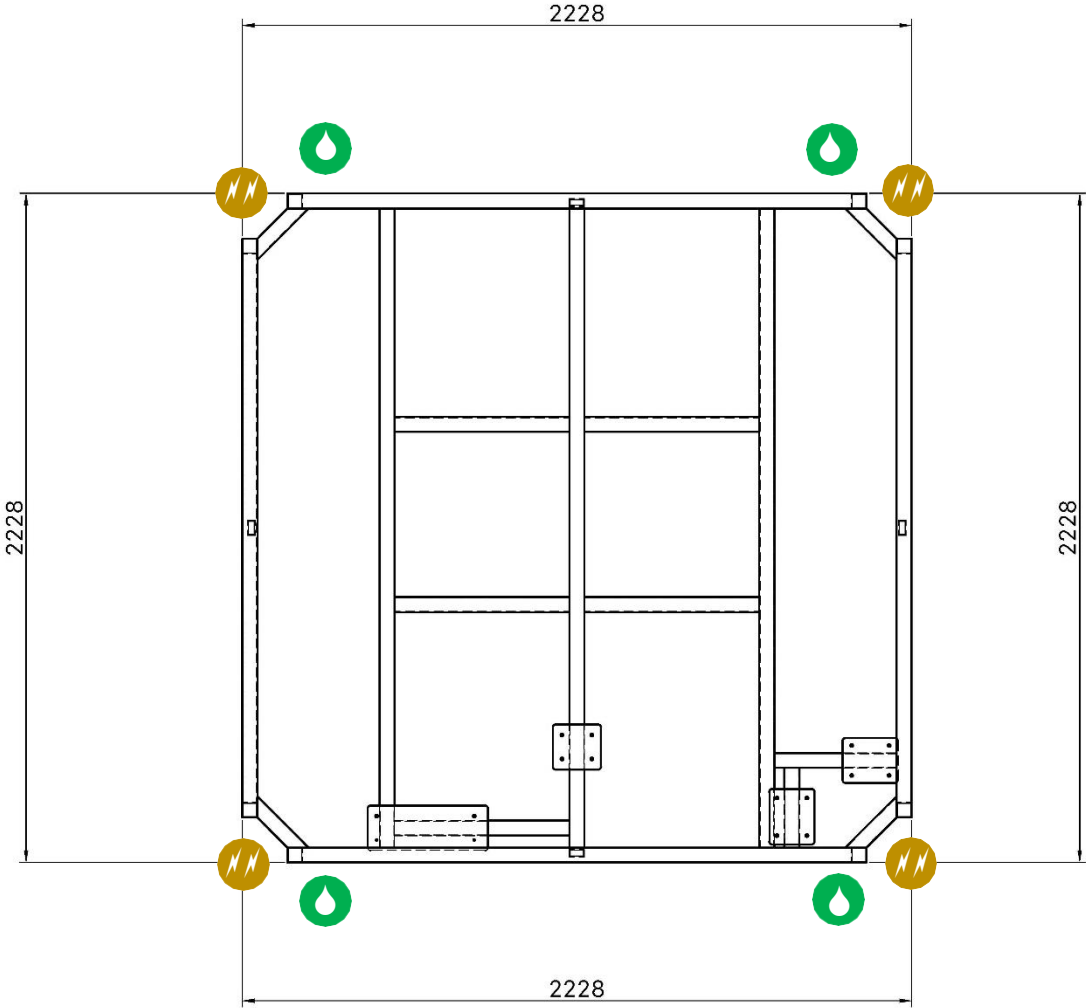
### Halo 5.8 Service Access Points



### Halo 2.1 Service Access Points



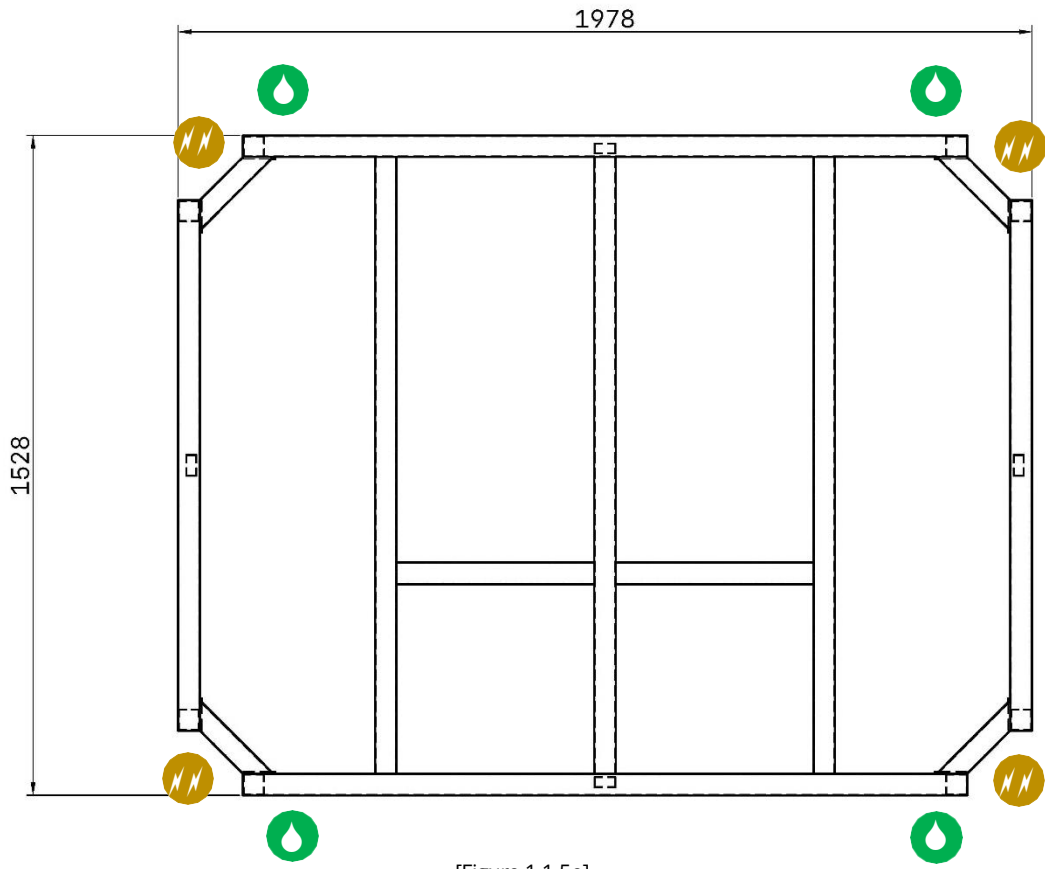
Halo 2.3 Service Access Points



[Figure 1.1.5d]



Halo 1.6 Service Access Points

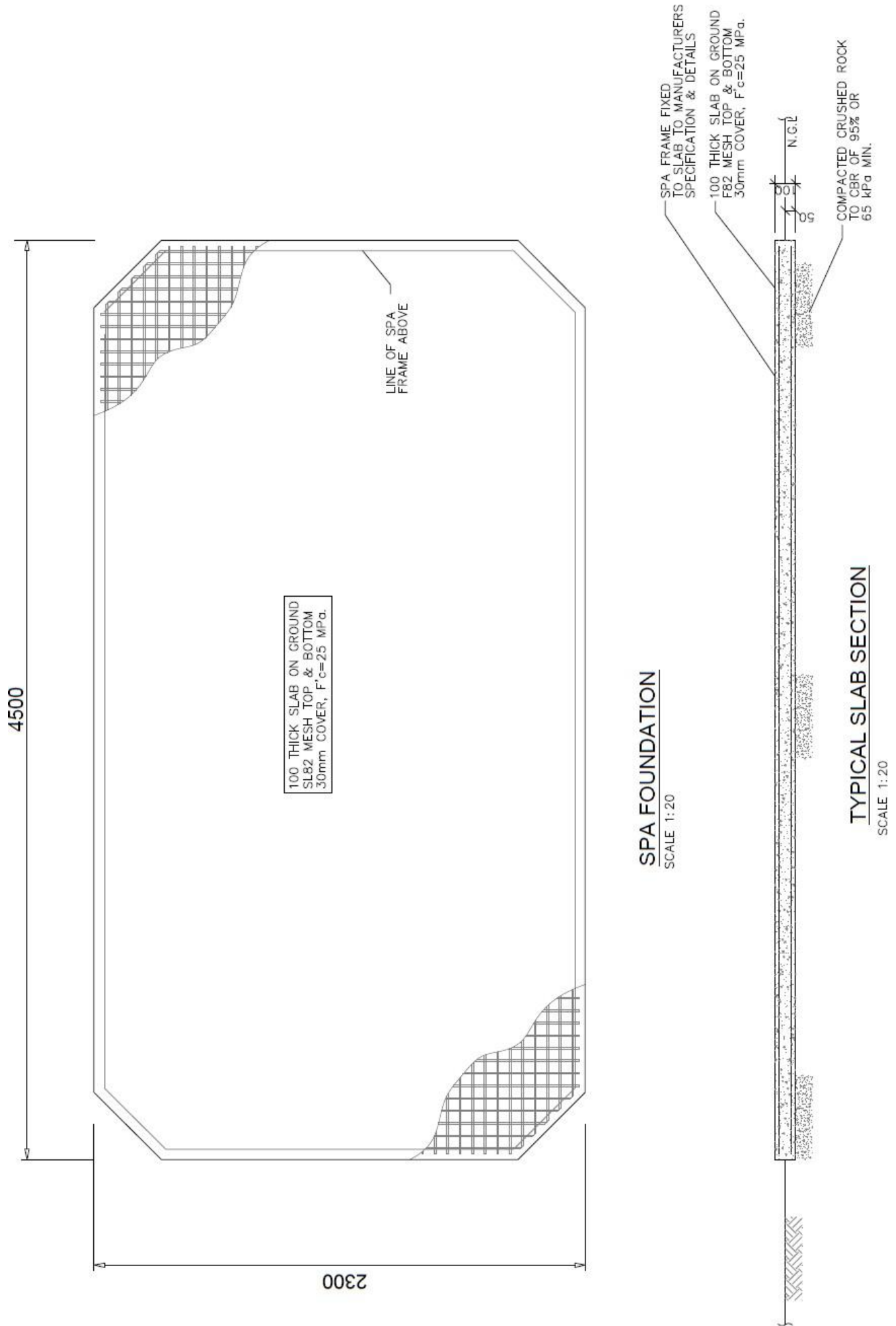


[Figure 1.1.5e]

# 1.1.6 Slab Specifications

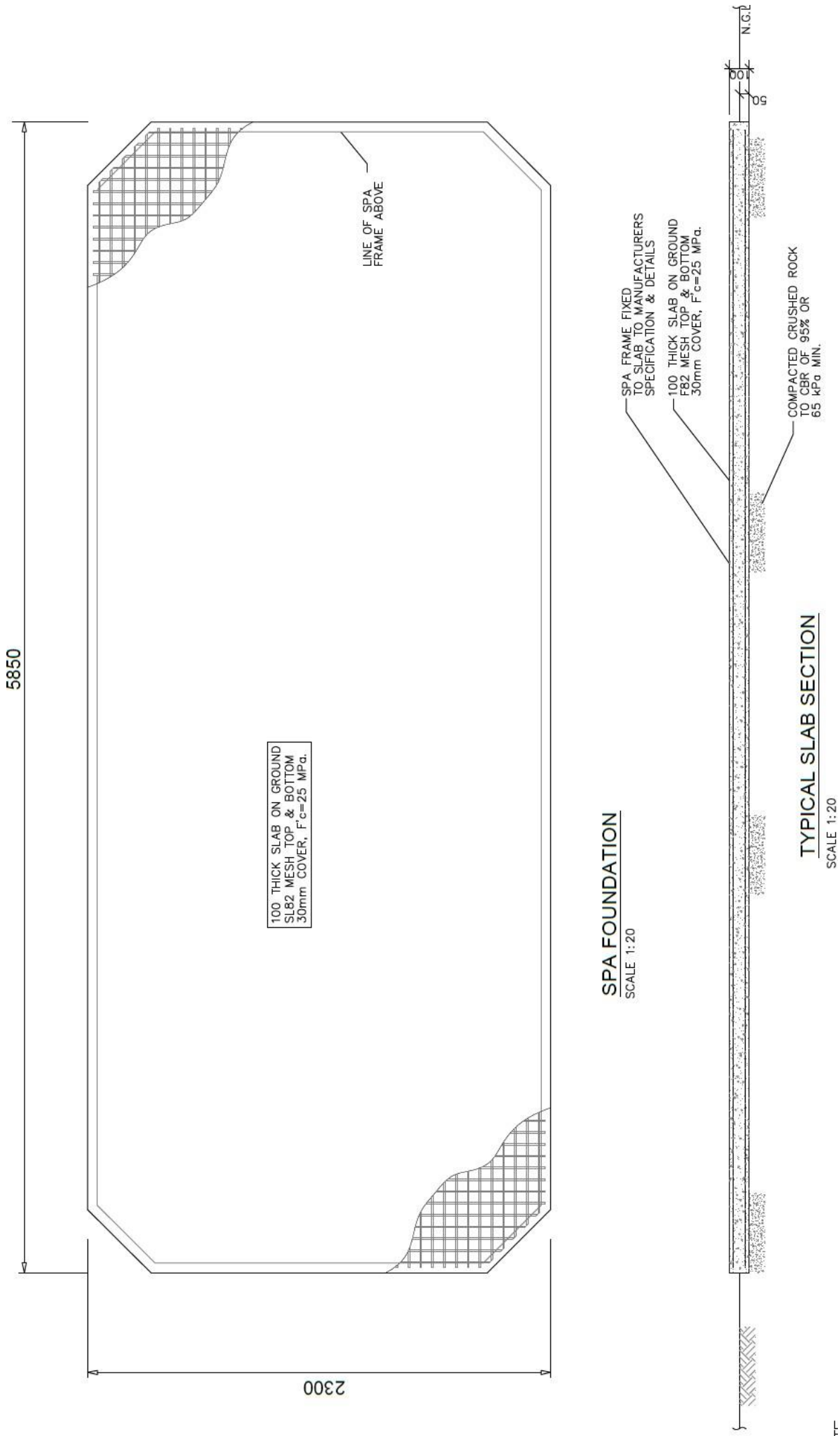
## Halo 4.5

[Figure 1.1.6a]



# Halo 5.8

[Figure 1.1.6b]



## 1.2. ELECTRICAL INSTALLATION & SAFETY

All electrical connections must be performed by a qualified registered electrical contractor. Upon completion of the installation, the electrical contractor must issue a Certificate of Electrical Safety.

### 1.2.1. Power Requirements

Please refer to the table below for specific power requirements of each Halo spa model. Additionally, the power consumption of your spa will be indicated on the Compliance Plate.

| Halo 4.5 | Halo 4.5 Max | Halo 5.8     | Halo 5.8 Max      |  |
|----------|--------------|--------------|-------------------|--|
| 16 AMPS  | 32 AMPS      | 16 + 16 AMPS | 16 AMPS + 32 AMPS |  |

| Halo 2.3D | Halo 2.3S | Halo 2.1D | Halo 2.1S | Halo 1.6 |
|-----------|-----------|-----------|-----------|----------|
| 16 AMPS   | 16 AMPS   | 16 AMPS   | 16 AMPS   | 13 AMPS  |

#### Halo Spas Model Name Reference

Max = Max Swim System Option, D = Double Lounger Model and S = Single Lounger Model

### 1.2.2. Connection Guidelines

- Extension cords are strictly prohibited.
- Hardwired connection to power must be performed by a registered electrical contractor, ensuring that the power supply is correctly rated, and all electrical connections comply with necessary codes and regulations.
- In accordance with AS/NZ 3000 regulations, all spas must be connected to a dedicated circuit. This circuit is to be protected a safety switch (ensuring all-poll disconnection) and a circuit breaker. Use a residual current device (RCD) with a rated tripping current not exceeding 30mA for the spa's power supply.
- To prevent hazards from unintended resetting of the thermal cutout, the spa must not be connected through an external switching device, such as a timer, or a circuit that's regularly switched on and off by the utility.
- Connect all metal objects within 1.25 meters to the main electrical earthing system.
- Parts containing live components (exceeding 12V) must be unreachable to an occupant of the spa.
- Keep electrical connections dry at all times.

### 1.2.3. Connecting Power to the Spa

- A registered electrical contractor must ensure electrical cables are routed through the base via the conduit access before filling the spa with water. For conduit entry points refer *Section 4.1.5. Incorporating Services into the Foundation*.
- Find the Balboa control box within the engine bay. Connect the power supply (line, neutral, ground) directly to the Balboa control box. Refer to Wiring Diagram inside the cover of the control box enclosure.
- For the Halo 5.8 models, two separate electrical connections are required. Connect the power supply to both Balboa control boxes, located in the engine bay of the spa end. The control box for the swim spa section will be positioned on the right-hand side of the engine bay.
- Use the correct size power supply cable and exercise extreme caution during connection to the Balboa control box. An incorrect connection risks damaging the control system.
- The Eco Heating System, powered by the Chilli Inverter Heat Pump, operates on the spa's existing circuit; no additional power circuits are needed.

## 1.3. HEAT PUMP INSTALLATION

The Chilli Inverter Heat Pump comes with signal and power cables already connected to the Halo spa Balboa control box. These cables will extend to and coil at the owner-nominated heat pump connection point inside the cabinetry. Additionally, the heat pump's PVC inlet and outlet pipe connections will be plumbed to this nominated connection point within the spa cabinetry. Refer to *Figure 4.3a*.



[Figure 1.3a]

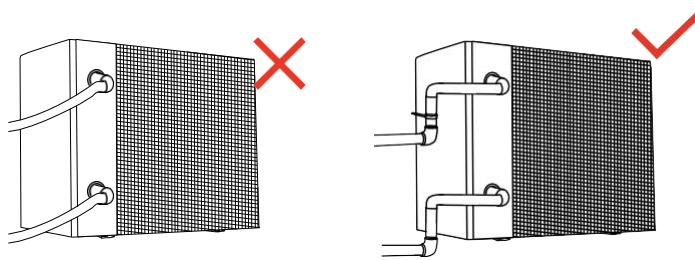
### 1.3.1. Installation Guidelines

- Professional Installation: Installation should be performed by professionals. Unqualified installation may lead to heat pump damage and safety hazards.
- Air Flow: Avoid placing objects near the inlet or outlet areas that might block air flow. Maintain a minimum clearance of 500mm behind the heat pump. Obstructions can hinder efficiency or even stop the heat pump. Refer to Section 3.1. *Understanding Space & Layout*.
- Securing the Frame: Anchor the frame using M10 bolts to a concrete foundation or brackets. The foundation should be solid, and any brackets used should be sturdy, rust-resistant, and properly treated.
- Condensation Management: Condensation water will discharge from the bottom of the heat pump. Securely attach the provided drainage nozzle accessory to the condensate hole and connect a pipe to channel the water away.

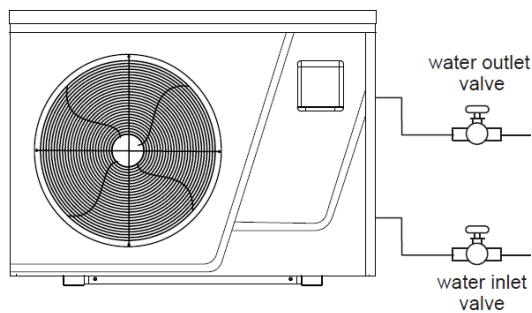
NOTE: The Wi-Fi module included with the Chilli Inverter Heat Pump is not required for installation. The Halo Spa comes equipped with its own Wi-Fi connectivity.

### 1.3.2. Connecting the Heat Pump to the Spa

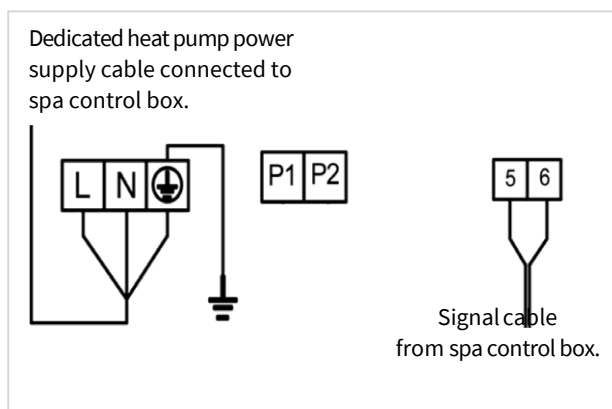
- Run two 40mm PVC pressure pipes (Class 12) from the spa's inlet and outlet to the corresponding inlet and outlet on the heat pump. Refer *Figure 4.3.2a*.
- Halo Spas strongly recommends the installation of gate valves on each of the heat pump inlet and outlets. These gate valves are essential for future servicing and maintenance. Refer *Figure 4.3.2b*.
- Make sure that the gate valve located above the Balboa circulation pump is in the closed position. This will redirect water flow to the Chilli Inverter heat pump, which is necessary to heat the spa.
- Run both the power supply and signal cable through a 25mm orange electrical conduit.
- The PVC pressure pipes and electrical conduit should be installed at a depth of 600mm to prevent potential damage.
- Connect the signal cable and power supply cable to the heat pump as shown in *Figure 4.3.2c*.
- After completing the cable connections, the spa control box will automatically detect the heat pump, facilitating its integration into the spa system.
- During the initial set up, adjust the temperature directly on the heat pump. Set it to "Heat" mode and a target temperature of 40°C.
- For subsequent temperature adjustments, please use the spa touchpad. The controller will take care of managing the heating process, and it will automatically turn off the heat pump once the target water temperature (e.g. 28°C) is achieved.



[Figure 1.3.2a]



[Figure 1.3.2b]



[Figure 1.3.2c]

For detailed instructions and additional product information, please refer to the Chilli Inverter Heat Pump Manual:



If the above procedures fail to address your issue, please contact the Halo Customer Support team for further assistance.

Phone: 1300 287 772 | Email [sales@halospas.com.au](mailto:sales@halospas.com.au)

