Installation Guide

Generator set Location

General Considerations

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Indoor Installations

- Generator set Installation Room. Distribution
  - Open Skid generator set
  - Soundproofed generator set
  - Generator set in container

Generator set location

The location of the generator set is very important, it is also necessary to take into account the proximity of the electrical switchboard, proper external fuel supply, the evacuation of exhaust fumes, disturbances caused by noise and exposure to exhaust fumes of other engines or airborne contaminants.

It is important **to check that the doors** of the generator set, **in the case of soundproofed gensets can be opened completely, allowing access to materials for maintenance and inspections, so it is possible to completely remove the genset; and that the cooling system works properly**.

In general, the area where the generator set is installed must be duly closed off to prevent access to unauthorized persons. **In the case of standard static gensets**, in order to avoid unwanted contact with the machine operator, **it is important to define a security area around the genset with a minimum distance of 2 meters of separation, leaving free access to both the control panel, and the emergency stop devices**. At the same time, it is necessary to place appropriate entry prohibition and danger signs in visible areas.

Outdoor Installations

We recommend positioning the generator set in a location which is as isolated as possible, avoiding locking the doors of the canopy or container and ensuring there are no elements that may hinder the entry and exit of air.

Choose a location **with adequate ventilation and in areas not prone to flooding during storms or the accumulation of snow, also avoiding other heat sources from being located close to the genset** (boilers, other engines...).

Protect the genset from exposure to airborne contaminants such as vapours, engine exhaust fumes, abrasive or conductive dust, oil mist, smoke, lint and other contaminants.

Avoid the transit areas of motor vehicles or forklift trucks and prevent possible impacts from falling objects like trees or poles.

- **Open skid generator set**

  This type of generator set is not designed for outdoor use. However you could study operation while sheltered under a basic structure, whereby the genset would be protected from rain, snow and sun, conditioning the exhaust pipes to prevent the accumulation of gases.

  However this solution could affect machine operation due to airborne contaminants, increased noise due to reverberation caused by the structure or improper venting, among other factors.

  Therefore for outdoor installations we recommend using static gensets which are soundproofed or in a container, designed and protected for use outdoors.

- **Soundproofed or in container generator set**

  Designed for use outside, these generator sets require no special protection for outdoor installation. The only requirement is that the necessary space be kept free so that all the genset doors can be opened and maintenance tasks can be performed without difficulty.

Indoor Installations

In the case of installing the generator set indoors particular attention should be taken with the ventilation system and the evacuation of exhaust fumes.

It is possible that by installing the genset in a closed enclosure the sound pressure level will increase with respect to the established value, due to echoes or reverberations generated with the walls. After installation the user should perform acoustic measurements to determine the sound pressure level under conditions of 75% of the prime load, and if necessary implement appropriate preventive measures. It might be good idea to consider installing noise reduction systems, such as double walls in the room, soundproofing materials in the walls, silencers, etc.

Generator set Installation Room

It is recommended that the room where the genset is installed be used exclusively for the operation of this equipment, together with electrical panels, transfer switches or other generator sets, isolated from other rooms. It must be possible to introduce the genset into this room with the means of transport available, being centred with respect to the access door in the case of one genset, positioned in the middle of the room without having to move it inside, if possible.

It is necessary to ensure there is adequate lighting which will allow all operations to be performed safely.

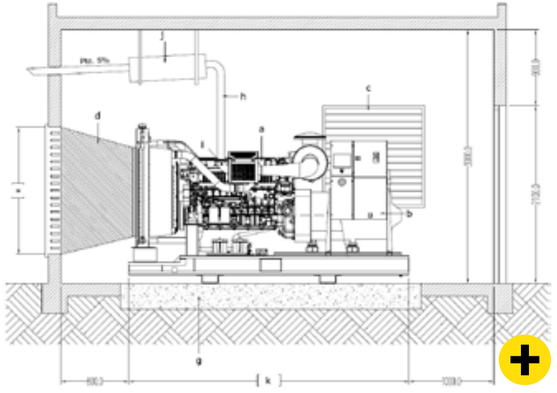
The separation distance of the genset, both on the two sides of the genset and the rear of the genset (alternator zone) with respect to the walls of the room should be at least 1 metre for gensets with power less than 300 kW, or 1.5 metres for gensets with higher power than 300 kW. For soundproof gensets, the separation distance may be greater because it is necessary to allow space for the complete opening of the doors. However, it is advisable to leave the largest possible free space around the genset to facilitate maintenance, also increasing the safety distance between operators and the machine.

It is advisable to place the generator set on the ground floor of a building or in a room at the level of the ground outside, allowing transport, maintenance, repairs and replacements to be carried out easily.

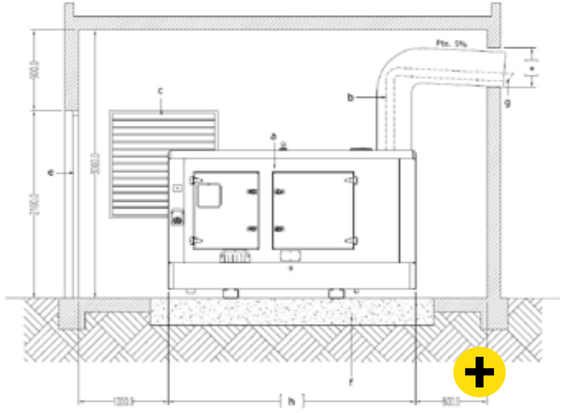
In the case of installing multiple generator sets, the instructions to be followed are the same. The installation of each of the gensets will be carried out following the instructions shown in this manual.

Recommended layout of the room housing the generator set

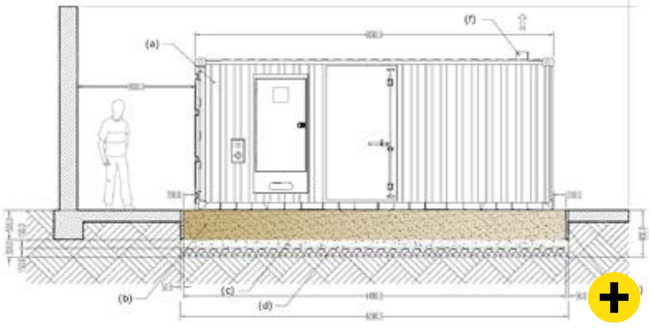
OPEN SKID GENERATOR SET



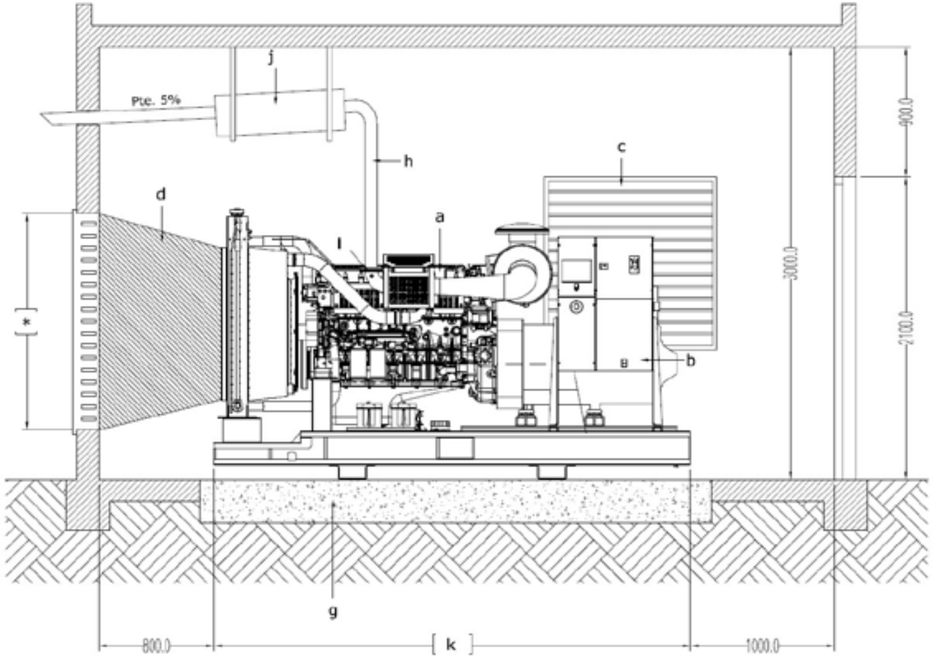
SOUNDPROOFED GENERATOR SET

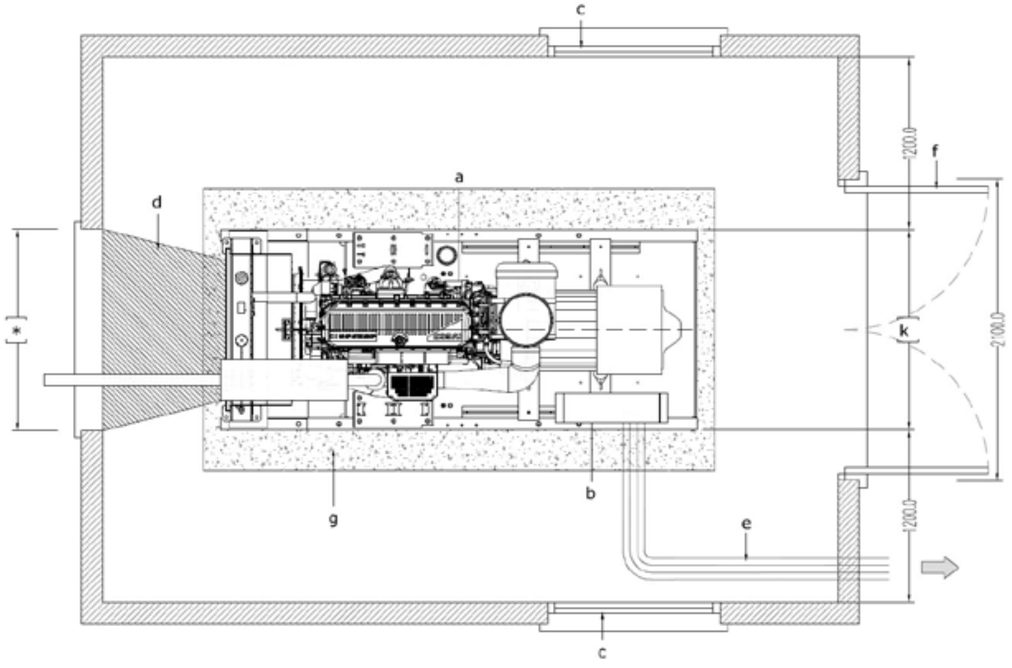


GENERATOR SET IN CONTAINER



Open skid generator set





a. Generator set

b. Control panel

c. Air inlet window

d. Tunnel air outlet

e. Tray electric cables

f. Door

g. Reinforced concrete base HA-175

h. Exhaust pipe

i. Flexible hose

j. Muffler

k. Open skid genset dimensions

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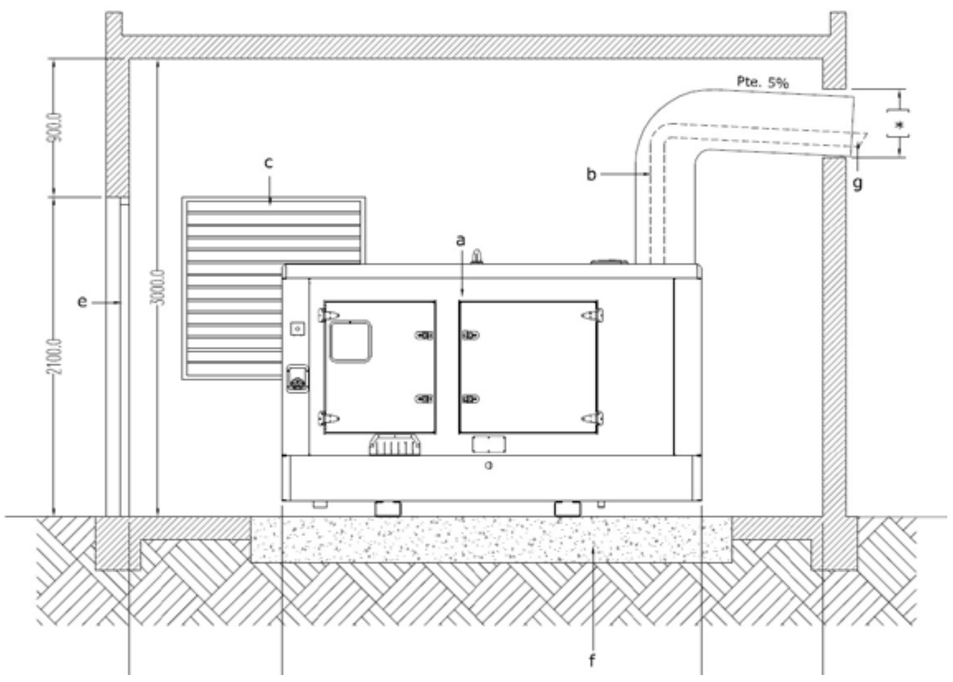
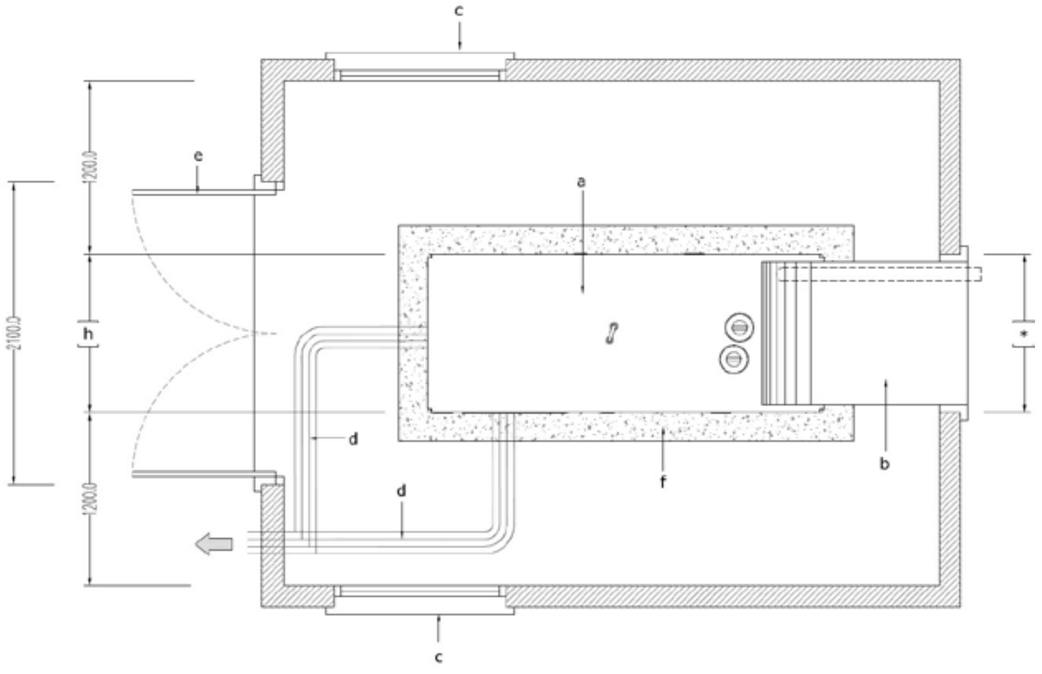
Soundproofed generator set





a. Generator set
b.Tunnel air outlet
c. Air inlet window
d. Tray electric cables
e. Door
f. Reinforced concrete base HA-175
g. Exhaust pipe
h. Soundproofed genset dimensions

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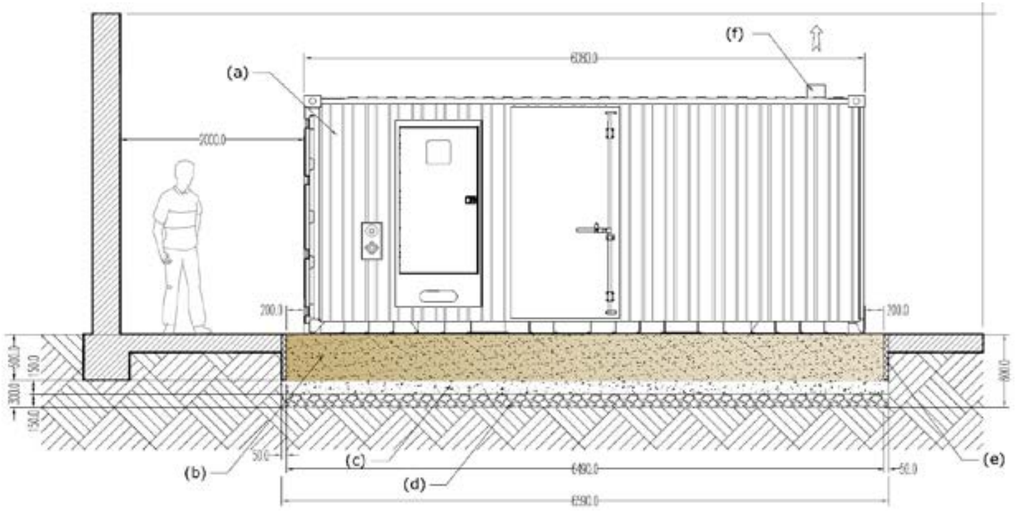
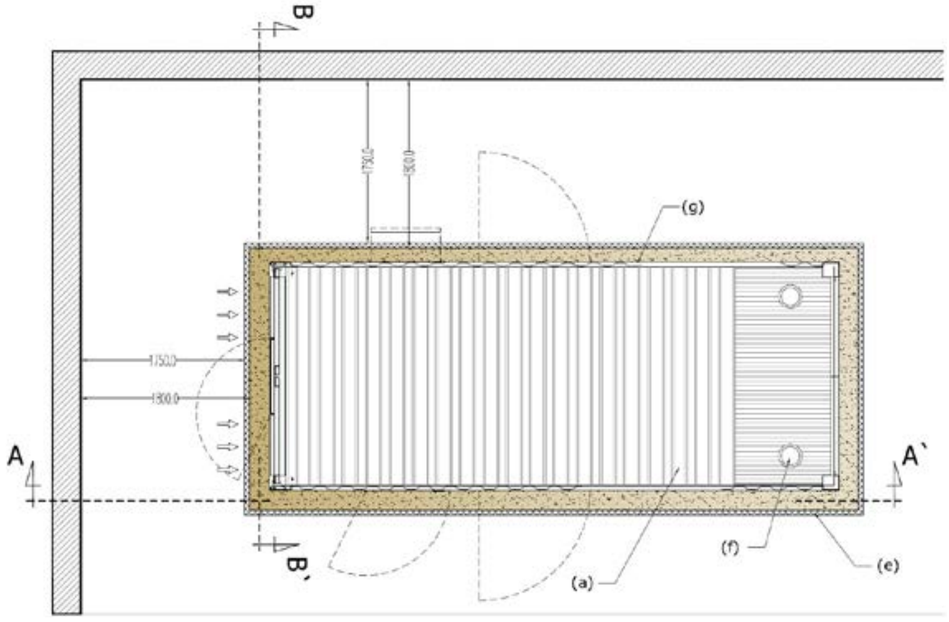
Generator set in container





a. 20 feet container
b. Concrete bed
c. Cleaner concrete bed
d. Compacted stone
e. Isulator polyethylene, polyurethane
f. Exhaust outlet
g. Optional automatic fuel transfer pump

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