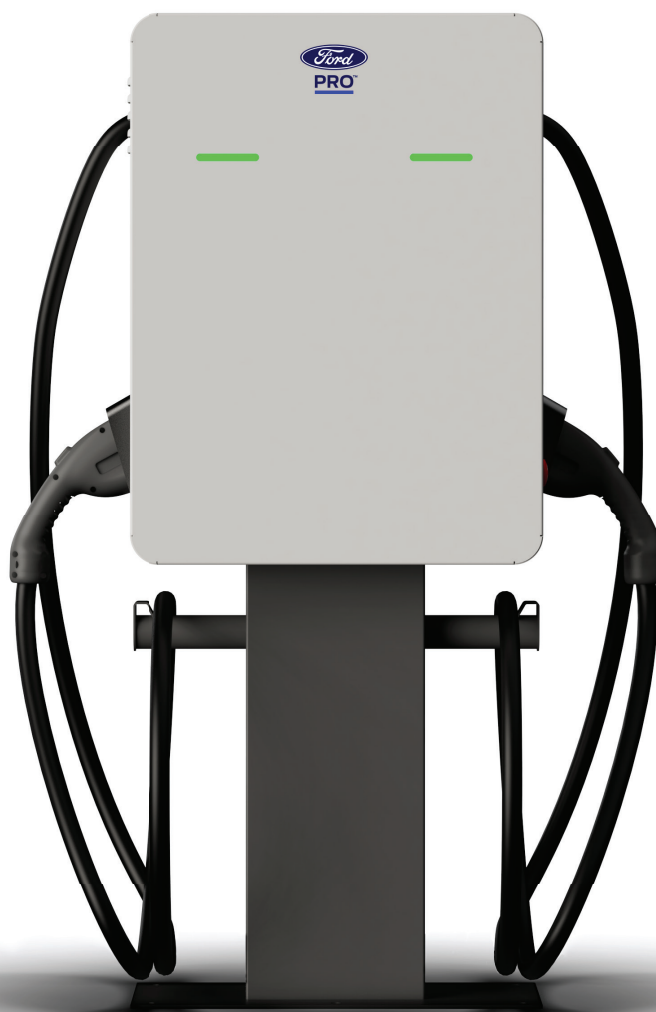




Ford ProTM Industrial DC Dispenser

Installation Manual Revision 1.5



PREPARATION FOR INSTALLING THE EQUIPMENT

Site recommendations

When deciding the location of the equipment and planning its installation, it is recommended to follow a series of guidelines derived from its characteristics.



CAUTION

To guarantee proper electrical installation, it is very important to comply with the bend radius of the cable. The customer must ensure the cables enter the equipment perpendicularly and the spacing between them is appropriate.

Avoid corrosive environments that may affect the equipment's proper functioning.



NOTICE

The instructions given in this section must not replace in any way the mandatory regulations of the country in which the equipment will be installed.

Prior to installation, a geotechnical study of the terrain where the charger will be installed must be carried out to determine its characteristics and to decide the most suitable type of foundation.

It is the customer's responsibility to design and build concrete foundations with the necessary piping and ground network in accordance with the applicable regulatory requirements.

Proper installation is absolutely necessary, and it is not within the scope of the manufacturer's responsibility.

Soil

The soil should have the following characteristics:

- The soil must be dry, compacted, stable and homogeneous.
- The land will be gravel, ballast or pebbles.
- Do not install on floodplains, neither in places where objects can fall on.
- The land should be provided with a drainage system, especially in locations with high water tables and/or heavy rainfall.
- It is recommended that the ground should not exceed the level of the foundation.
- Maximum permissible ground pressure of 150 kN/m².
- Soil compaction degree of 98%.
- Maximum land unevenness of 0.25%.
- It must not be a direct place of passage so that the load cables do not interrupt the movement of pedestrians or traffic.

Base site

Power Electronics recommends making a concrete foundation slab to support the equipment.

The support surface for the equipment must be perfectly level. **The client is responsible for the correct dimensioning and construction of the foundation in accordance with current regulations.** The foundation must meet the following characteristics:

- It is recommended that a layer of cleaning concrete be installed between the ground and the foundation.
- The sizing should be appropriate for the weight of the equipment and the characteristics of the soil
- It must be thick enough to support the equipment.
- It must have trenches wide enough to ensure proper wiring passage.
- It is advisable to leave the slab at the same level as the ground to facilitate maintenance work.
- If the slab is above ground level, the maximum height allowed is 200 mm (7.87 in).



NOTICE

The client is responsible for building a solid concrete base perfectly leveled and elevated with respect to the user's floor height.

In case of specification of variable actions such as snow, wind or earthquake, the slab must comply with the following requirements, **not being excluding those indicated by the specific regulations of the country of installation:**

- Ability to withstand compression forces of 25 N/mm².
- Steel reinforcement capable of withstanding tensile forces of 500 N/mm².
- Taking into account severe wind conditions (60 m/s), the reinforcement should be dimensioned as follows:
 - The longitudinal side of the reinforcement must be able to withstand forces of up to 80 kN.
 - The transverse side of the reinforcement must be able to withstand forces of up to 10 kN.

Note that the thickness of the slab must be determined from the results of the geotechnical study.

See anchor recommendations at the "[Anchoring of the equipment](#)" section.

Minimum working distances

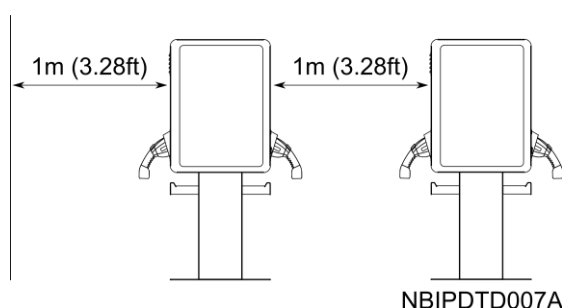


CAUTION

When installing the equipment, keep the minimum safety distances. Be aware of all the minimum insulation requirements established by the applicable electrical code, as well as the thermal, safety and accessibility requirements. The safety distances given in this section must not replace in any way the mandatory regulations of the country in which the equipment will be installed.

Industrial posts can be mounted on a wall or on the ground using its pedestal. For proper inspection and ventilation, as well as to facilitate access to the cabinet, it is recommended to leave the following clearance distances:

Side to side: Each post requires 1 m (3.28 ft) clearance side to side.



Rear side distance: when installed with the pedestal, it requires 1 m (3.28 ft) rear free space to allow the access and work on the rear cover for connections. This distance is not required when installed with the wall fixation.

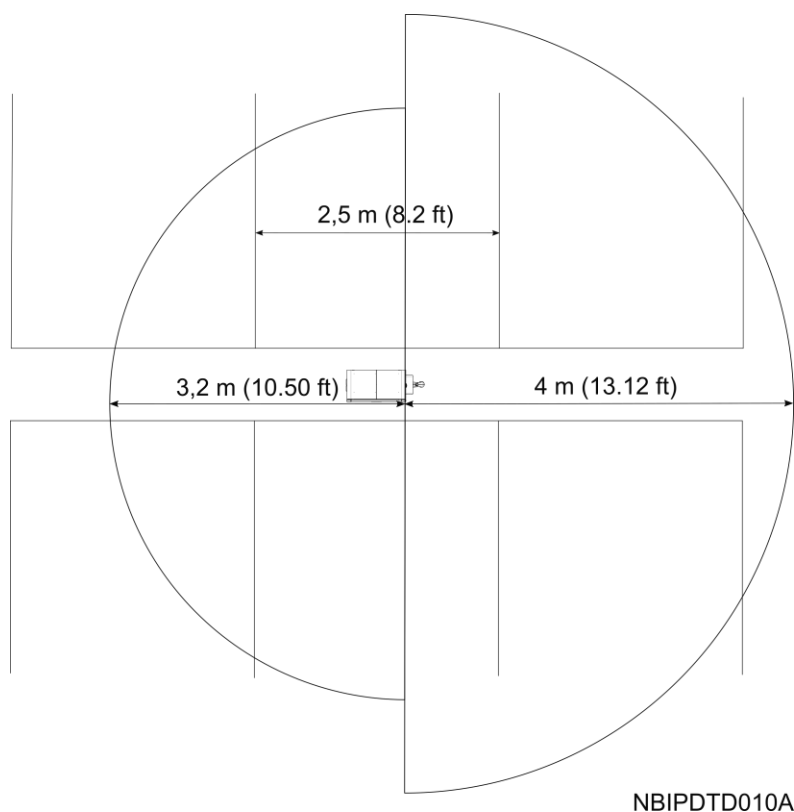
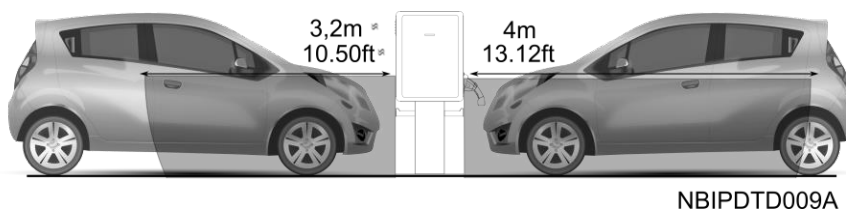
Please notice that, besides the recommended clearances indicated above, the distance between parking spaces must also be taken into account, as well as the maximum range of the hose.

The distance between the power cabinet and the industrial post cannot exceed 80 m (262.46 ft) with Ethernet communication or 150 m (492.13 ft) with the optical fiber communication, as optional.

Maximum hose range

When installing the equipment, note that the single-hose post has the exit on the right side. Therefore, the maximum range of cables depends on the installation position of the post. The hose range depends on the length selected by the customer; the standard hose is 4 m (13.12 ft), but other options are available.

The following figures show an example of the cable range area in a parking lot with the centralized post:



Anchoring of the equipment



NOTICE

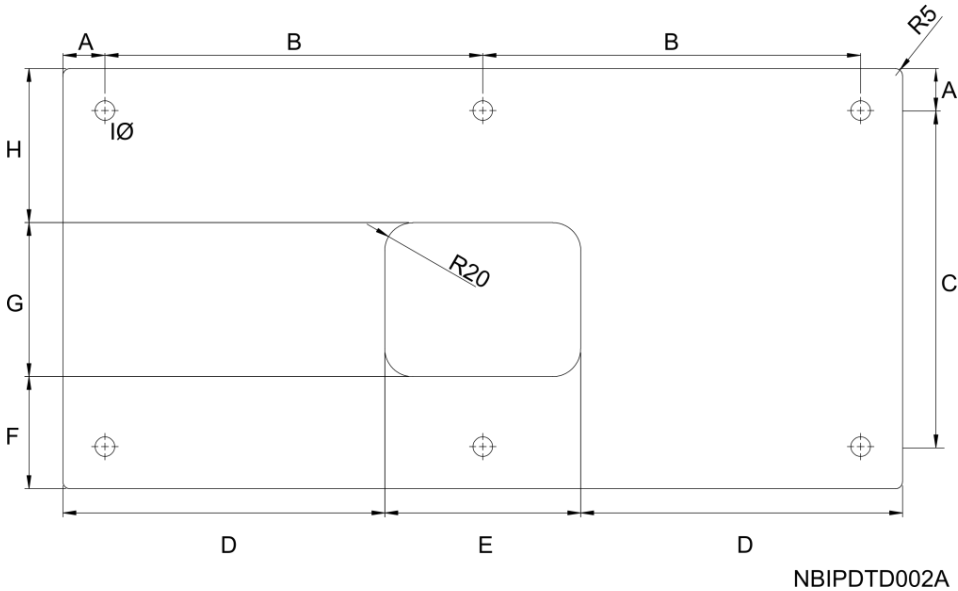
It is the customer’s responsibility to dimension correctly posts anchoring to the foundation, guaranteeing stability towards horizontal actions.

Ground fixation

The cabinet pedestal must be anchored to a solid and leveled surface (slab), see slab recommendations at the "[Base site](#)" section.

To anchor the equipment, it is recommended to use M12 (1/2”) A4-70 stainless screws for high load solicitations, being accepted both expansive anchor bolts and chemical. Please, secure them applying the recommended torque for mechanical connections.

The following figure shows the location of the anchorage holes in the pedestal (bottom view). Values are summarized in the table below.



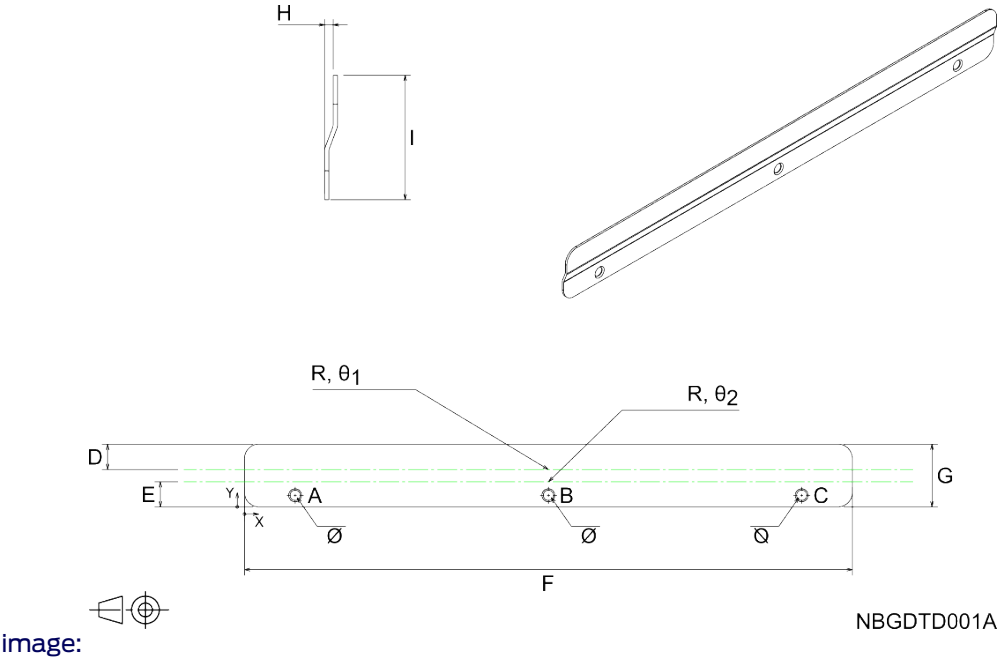
PEDESTAL
DIMENSIONS

	A	B	C	D	E	F	G	H	IØ
m	30	270	240,6	230	140	80	110	110	14
in.	1.18	10.62	9.47	9.05	5.51	3.14	4.33	4.33	0.55

Wall fixation

To install the cabinet on a wall, if the pedestal is installed it must be removed by unscrewing the M6 (1/4") screws.

The customer must install the fixing bracket on the rear side of the cabinet using three M6 (1/4") A4-70 countersunk stainless screws. The fixing bracket is shown in the following

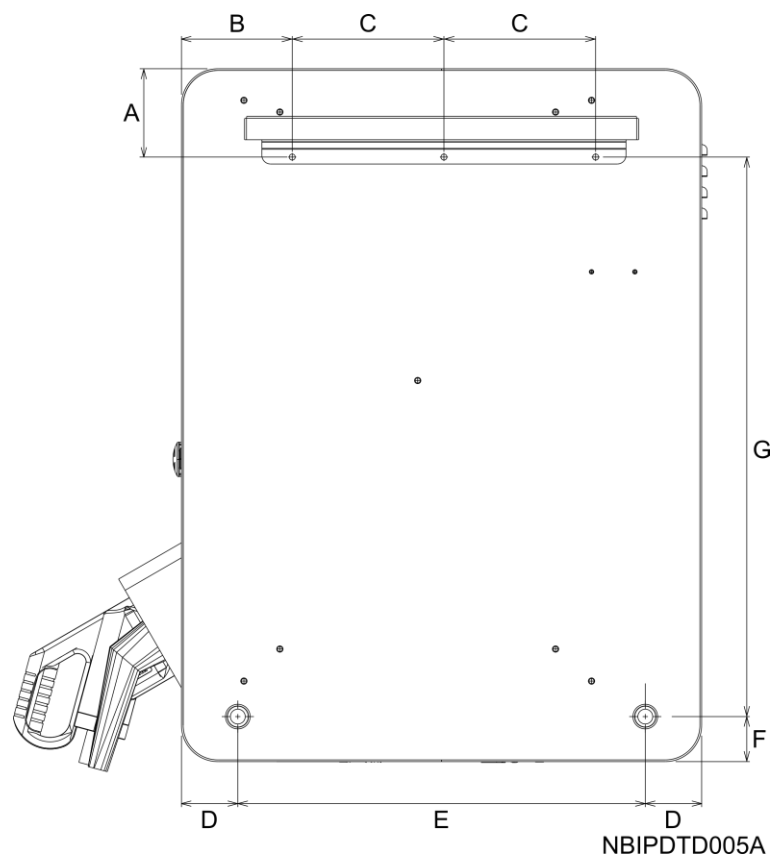


	A		B		C		Φ	R	Θ ₁	Θ ₂
	X	Y	X	Y	X	Y				
m	35	8	210	8	385	8	M6	1,5	159,44	159,44
m									deg	deg
in.	1.38	0.31	8.27	0.31	15.16	0.31	1/4	0.06	down	up

	D	E	F	G	H	I
mm	17,58	17,31	420	43,34	3	43
in.	0.69	0.68	16.54	1.71	0.12	1.69

Then, the customer must drill two 7 mm (0.28 in) holes on the lower part of the cabinet. M6 (1/4") A4- 70 stainless screws will be used for fixation to the wall.

The figure below shows the cabinet (rear view) with the location of the fixing bracket once installed and of the two additional holes.



	A	B	C	D	E	F	G
m	102	125	175	65	470	52	646
in.	4.0	4.9	6.8	2.56	18.50	2.05	25.43
		2	8				

Ventilation system

CAUTION

Special care must be taken to ensure that there are no external elements near the air inlets and outlets that prevent proper ventilation of the equipment.

