

GROUND PLUG®

THE PATENTED AND DESIGN PROTECTED

GROUNDPLUG HE FOUNDATION

THE PERFECT SOLUTION FOR FOUNDATIONS



GROUNDPLUG HE FOUNDATION

GROUNDPLUG HE FOUNDATION IS MAINLY USED AS A FOUNDATION FOR ROAD OR RAILWAY NOISE BARRIERS, ROAD SAFETY BARRIERS AND SIGN-AGE.

The assembly of the carrying structure with HE foundation is:

- Steel pile made of the HE profile (mainly HEA and HEB) with extra fins on the sides, driven into the ground by a regular excavator,
- Unique bolted connection between the GroundPlug HE foundation and where the post is mounted with an adjustable plate,
- The post for the noise barrier is mounted with the threaded rod on the adjustable plate,
- The noise barrier panels are then mounted.



HE FOUNDATION ADVANTAGE

From a constructional point of view, Ground-Plug HE foundations have strong advantages compared to the standard concrete pile or foot concrete foundation. The needed envelope clearance in order to install the GroundPlug foundation is much smaller, so there is no need for excavation.

GROUNDPLUG HE FOUNDATION



THE GROUNDPLUG INTERNATIONAL CAN INSTALL UP TO 50 STEEL FOUNDATIONS A DAY.

In case of accidents where noise barriers are destroyed, replacement of the post and the foundation cause no problem and can be adjusted or changed easily, unlike traditional foundations.

Groundplug International can provide 12 standard types of GroundPlug HE Foundations with moment capacity from 23kNm to 370 kNm.

The standard HE100 to HE400 foundations are of steel grade s355. Lengths of products depend on soil conditions.



HE FOUNDATION

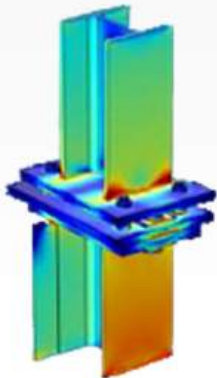
The standard products are of steel grade S355 of types HE100 to HE400. The lengths of such products depend on soil conditions.

All patented products* are protected against corrosion through a hot-dip galvanizing process.



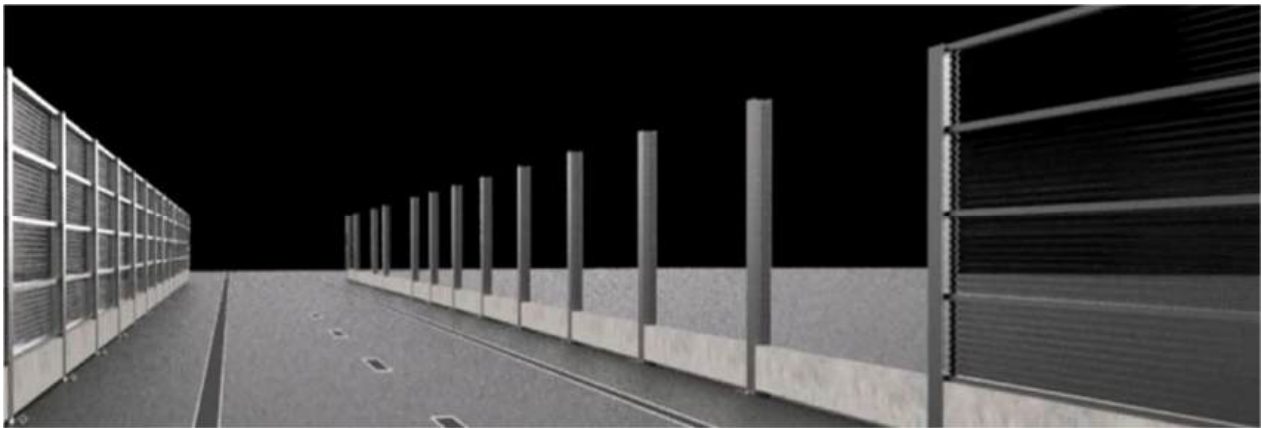
*Specific Intellectual Property inquiries should be directed to the Headquarter in Denmark.

DOCUMENTATION



ALL STEEL FOUNDATIONS OFFERED BY GROUNDPLUG ARE BASED ON CALCULATION USING:

EN 1990, EN 1991-1-1, EN 1991-1-3, EN 1991-1-4, EN 1991-2, EN 1993-1-1, EN 1993-1-3, EN, 1993-1-5, EN 1993-1-8, EN 1993-1-9, EN 1993-5, EN 1997-1, EN 1997-2, EN 1794-1.

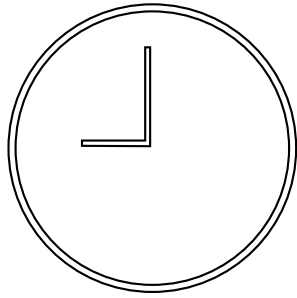


CALCULATIONS

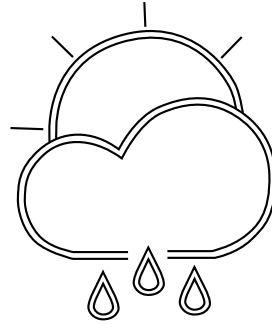
Analytical calculations & practical tests:

- ASTM Standard Designation (ASTM D1143, ASTM D3689, ASTM D3966) of compression, tension and lateral loading on single piles. Performed by Applied Foundation Testing (AFT), USA, and CLT THOMPSON INC, USA.
- NIRAS capacity and soil calculations, verified by LPILE by Ensoft Inc.

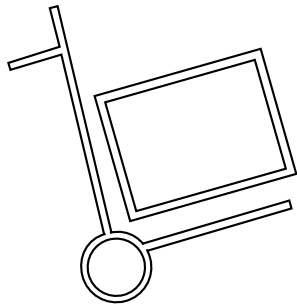
Our engineering team can provide design documentation for any structure based on European Design Standards (Eurocodes 0-9) with applied National Annexes. Calculations can also be performed based on valid American and Australian Design Standards.



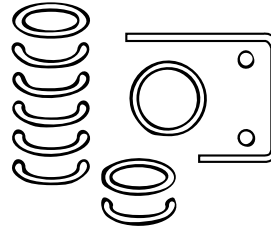
Installation takes less than 20 minutes



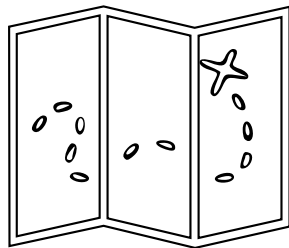
Installation regardless of conditions.



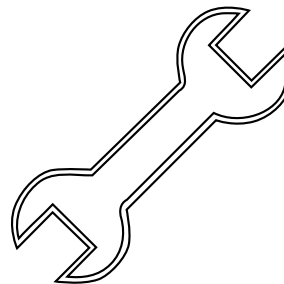
One source for all the products



Time and money savings



No multiple visits to the site



Fully adjustable after installation

GroundPlug International ApS

Denmark's most experienced provider of steel foundations to noise barriers