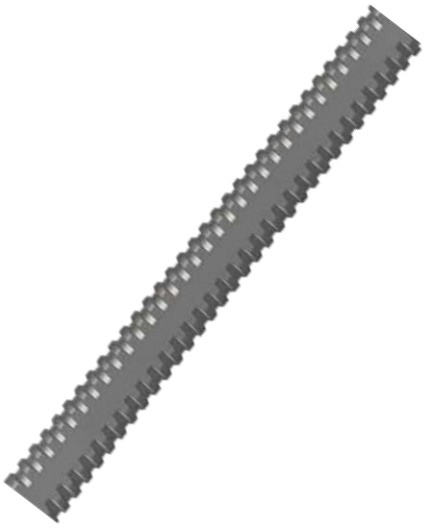
FORMIN®
INDUSTRIA DE FORTIFICACIÓN MINERA

Helical Bolt

Product Description

Hot-rolled steel bar with wide-pitch helical threads, designed to work in conjunction with a steel bearing plate (flat or domed) and a domed steel nut as part of the anchoring system.
The threaded bar is specifically engineered to reinforce and preserve the natural strength of rock strata, soils, or slopes, making it ideal for use in geotechnical and underground support applications.



Advantages

- Immediate reinforcement upon installation.
- High pull-out resistance due to its wide-pitch helical thread design.
- Compatible with different types of steel bearing plates (flat or domed).
- Suitable for unstable ground conditions, fractured rock, or soft soils.
- Can be used with cement grout or resin for increased load capacity.
- Allows easy inspection and maintenance.
- Simple installation using standard drilling equipment.

Chemical Composition and Mechanical Properties of the Steel

Standard / Grade	Carbon (C) % Max.	Manganese (Mn) % Max.	Phosphorus (P) % Max.	Sulfur (S) % Max.	Silicon (Si) % Max.	Minimum Yield Strength (MPa)	Tensile Strength (MPa)	Elongation over 50 mm (Min. %)
ASTM A615 – GR75	0.386	0.929	0.075	0.037	0.200	520	690	20.00

Galvanizing Technical Specifications

Norma de Galvanizado	Galvanizing Standard	Recubrimiento (Micras)	Procedure
ASTM A123	ASTM A153 centrifugado	80	Inmersión en Caliente

Product Technical Specifications

Ø Nominal Diameter (mm)	Yield Load (kN)	Tensile Load (kN)	Nominal Weight (kg/m)	Outer Diameter (mm)
19	146	195	2.15	21.5
22	200	270	2.85	24.6
25	263	350	3.85	27.9
32	425	564	6.05	34.8

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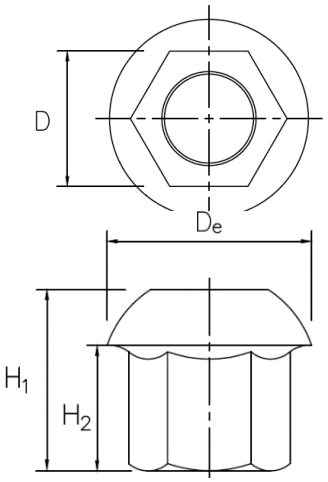
Spherical Steel Nut

Our nut is manufactured from ductile cast iron with spheroidal graphite. Its main function is to properly position the bearing plate against the ground surface. The nut features beveled edges, allowing it to adapt to both domed and flat plates

Ø Nominal Diameter (mm)	Manufac-turing Standard	Ø Outer Diameter (De)	Total Height (H1)	Altura Total (H_2)	Width Across Flats (D)	Unit Weight (g)
19	ASTM A194	42.7	34.9	22.0	31.8	160
19	ASTM A536	42.0	34.9	22.0	31.8	160
22	ASTM A194	49.3	41.3	25.0	34.9	226
22	ASTM A536	49.0	37.0	21.0	32.0	226
25	ASTM A194	55.1	44.5	28.0	38.1	325
32	ASTM A194	69.9	57.2	37.0	46.0	542

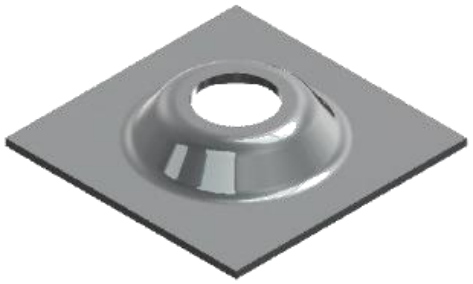


(*) ASTM A536: Nut manufactured from ductile cast iron with spheroidal graphite.
**) ASTM A194: Nut manufactured from forged steel.

Steel Plate

Our plate is used to anchor the bolt to the ground and properly distribute the applied load. It is manufactured in domed and hemispherical versions using ASTM A36 structural steel.

Ø Nominal de barra (mm)	Espesor (mm)	Presentación	Ø Orificio (mm)	Lado (mm)
19	4.5	Hemispherical and Domed	32	200
22	4.5	Hemispherical and Domed	38	200
25	4.5	Hemispherical and Domed	44	200
32	4.5	Hemispherical and Domed	44	200
19	9.5	Domed	32	150
22	9.5	Domed	38	150
25	9.5	Domed	44	150
32	9.5	Domed	44	150
25	9.5	Domo	44	200



Placa de Anclaje Tipo Domo
Acero ASTM A36
Medidas: 150×150×4.0mm