

# Steel Dryfast

The AISI 304/316L stainless steel helical bar, with a 8-10-12 mm diameter, is a high mechanical performance stainless steel helical bar for connection and for dry binding of structural elements using the dry installation system.

Thanks to its particular shape and manufacturing process, Steel Dryfast acts like a huge self-tapping screw, gripping the support, after a pilot bore has been drilled. The bar is suitable to connect together elements in brick masonry, raw earth, tuff, timber and in certain cases even concrete elements according to the mechanical characteristics of the support.



1. CE mark
2. Documentation availability EPD
3. Excellent durability guaranteed by AISI 304/316L stainless steel
4. Quick and easy dry installation in any weather conditions, using the special Steel Dryfast driver attachment
5. Adhesion can be verifiable on site by pull-out test
6. Limited invasiveness and aesthetic impact
7. High tensile and shear strength
8. Steel Dryfast 10 connectable to Steel Dryfast bars using the Steel Dryfast 10 Connector
9. Steel Dryfast 8-10 compatible with Steel Dryfast 8-10 Connection Cap

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## Areas of application

### → Intended use

- Connecting wall panels, in cases in which the teeth are not attached together well
- Break-fill work of damaged or cracked architraves
- Break-fill work at the soffit of masonry arches
- Binding for coating facades
- Break-fill work of decorative stone which decorates the structure at the back
- Connection of wooden beam heads to the masonry support
- Break-fill work of cracks in the masonry structure, made of brick, raw earth, tuff
- Limitation of the crack
- Seismic improvement of walls with emerging inner debonding/collapse of parts of the masonry

- Anti-collapse connection for stud walls
- Creation of connections for bundles and widespread strengthening systems made with meshes and sheets from the Geosteel range, by bending the helical bars or in combination with Steel Dryfast 8-10 Insert
- Creation of mechanical anchoring for preventive or protective systems for floors subject to break-away of the bottom layer in combination with Steel Dryfast 8-10 Insert
- Creation of mechanical anchoring for anti-collapse prevention systems for stud walls, by bending the bars or in combination with Steel Dryfast 8-10 Insert.

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## Instructions for use

### → Preparation

Bars are supplied in rolls or ready-to-install pieces by means of a special system for dry piling. Alternatively, the length of bar required in the consolidation operation must be cut using an angle grinder or suitable shears.

### → Preparation of substrates

The masonry must be prepared following the instructions dictated by the PM, if appropriate. In the case of through cracks after installing the break-fill work bars, proceed with filling the cracks with geo-mortar made of pure natural lime NHL and geo-binder (such as Geocalce G Antisismico or Geocalce F Antisismico) or Biocalce Pietra, depending on the support, and the injection of suitable slurry key to restore the material continuity of the masonry. For historical walls, proceed with the injection of Geocalce FL Antisismico.

### → Application

Drill a pilot bore of an appropriate diameter depending on the consistency of the substrate and the length specified during the planning phase. After placing the appropriate Steel Dryfast Driver attachment into a drill with SDS Plus coupling, install the bar into the pre-drilled bore to the length specified during the planning phase, excluding rotation.

If required, bend the bar or apply the appropriate Steel Dryfast 8-10 Insert. After the bar has been inserted fill the end of the bore with a suitable geo-mortar (Geocalce G Antisismico, Geocalce F Antisismico, Geolite) or organic matrix (Geolite) in order to achieve perfect sealing of the bore and restore the initial part of the bore so as to ensure perfect adherence of the bar to the substrate even at the initial part.

→ In order to assess the performance of adhesion/extraction on different supports, you are advised to contact our technical office. Pull-out test is accomplished on site using a suitable test kit Steel Dryfast.

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## Special notes

→ The Steel Dryfast Driver attachment is essential for installation, and is supplied in packs of one.

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# Certificates and marks



3015-EPD-030066928

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## Abstract

### *The Steel Dryfast 8 AISI 304/316 stainless steel helical bar*

Execution of reinforcement, and break-fill work of masonry made from brick, raw earth, tuff, wood and other material by means of Steel Dryfast 8 AISI 304/316L stainless steel helical bar, installed in specified pilot bore in the structure, subject to possible repair of weakened surfaces, by means of the appropriate chuck supplied Steel Dryfast 8 Driver attachment which is tapped into position. They include: (1) making a pilot bore of a suitable diameter, according to the bar and to the material from which the element to be reinforced is composed; (2) installing the bar inside the bore by means of the appropriate Steel Dryfast 8 Driver attachment and possible extension according to the length of the bar; (3) Possible filling of the bore with suitable material, which will depend on the type of support, that is: Geocalce G Antisismico, Geocalce F Antisismico or Biocalce Pietra, for masonry substrates; Geolite, for reinforced concrete supports; Geolite Gel for supports in reinforced concrete or other materials. The break-fill work bar must guarantee the minimum performance characteristics of the plan, in other words: tensile breaking load  $\geq 11.6$  kN; shear breaking load  $\geq 8.7$  kN; modulus of elasticity  $\geq 125$  GPa; ultimate elongation at rupture  $\geq 4.8\%$ ; nominal area  $10.4$  mm<sup>2</sup>.

The price is by unit of bar length actually laid.

Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: restoration of degraded areas and repair of the substrate; mortar to fill and mask the bore; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.

### *The Steel Dryfast 10 AISI 304/316 stainless steel helical bar*

Execution of reinforcement, and break-fill work of masonry made from brick, raw earth, tuff, wood and other material by means of Steel Dryfast 10 AISI 304/316L stainless steel helical bar, installed in specified pilot bore in the structure, subject to possible repair of weakened surfaces, by means of the appropriate chuck supplied Steel Dryfast 10-12 Driver attachment which is tapped into position.

They include: (1) making a pilot bore of a suitable diameter, according to the bar and to the material from which the element to be reinforced is composed; (2) installing the bar inside the bore by means of the appropriate Steel Dryfast 10-12 Driver attachment and possible extension according to the length of the bar; (3) Possible filling of the bore with suitable material, which will depend on the type of support, that is: Geocalce G Antisismico, Geocalce F Antisismico or Biocalce Pietra, for masonry substrates; Geolite, for reinforced concrete supports; Geolite Gel for supports in reinforced concrete or other materials. The break-fill work bar must guarantee the minimum performance characteristics of the plan, in other words: tensile breaking load  $\geq 15.4$  kN; shear breaking load  $\geq 11.7$  kN; modulus of elasticity  $\geq 125$  GPa; ultimate elongation at rupture  $\geq 5.7\%$ ; nominal area  $12.9$  mm<sup>2</sup>.

The price is by unit of bar length actually laid.

Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: restoration of degraded areas and repair of the substrate; mortar to fill and mask the bore; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.

### *The Steel Dryfast 12 AISI 304/316 stainless steel helical bar*

Execution of reinforcement, and break-fill work of masonry made from brick, raw earth, tuff, wood and other material by means of Steel Dryfast 12 AISI 304/316L stainless steel helical bar, installed in specified pilot bore in the structure, subject to possible repair of weakened surfaces, by means of the appropriate chuck supplied Steel Dryfast 10-12 Driver attachment which is tapped into position. They include: (1) making a pilot bore of a suitable diameter, according to the bar and to the material from which the element to be reinforced is composed; (2) installing the bar inside the bore by means of the appropriate Steel Dryfast 10-12 Driver attachment and possible extension according to the length of the bar; (3) Possible filling of the bore with suitable material, which will depend on the type of support, that is: Geocalce G Antisismico, Geocalce F Antisismico or Biocalce Pietra, for masonry substrates; Geolite, for reinforced concrete supports; Geolite Gel for supports in reinforced concrete or other materials. The break-fill work bar must guarantee the minimum performance characteristics of the plan, in other words: tensile breaking load  $\geq 18.9$  kN; shear breaking load  $\geq 15.0$  kN; modulus of elasticity  $\geq 120$  GPa; ultimate elongation at rupture  $\geq 3.9\%$ ; nominal area  $14.8$  mm<sup>2</sup>.

The price is by unit of bar length actually laid.

Delivery and installation of all the materials described above as well as everything else required to finish the job is included. The following are excluded: restoration of degraded areas and repair of the substrate; mortar to fill and mask the bore; material acceptance tests; pre- and post-procedure testing, all aids required to perform the work.

**Technical Data compliant with Kerakoll Quality Standard**

Material	AISI 304/316L stainless				
Nominal diameter		ø 8 mm	ø 10 mm	ø 12 mm	
Nominal area of the bar	$A_{elica}$	10.4 mm <sup>2</sup>	12.9 mm <sup>2</sup>	14.8 mm <sup>2</sup>	
Tensile breaking load	N	≥ 11.6 kN	≥ 15.4 kN	≥ 18.9 kN	UNI EN ISO 6892-1:2016
Shear breaking load	T	≥ 8.7 kN	≥ 11.7 kN	≥ 15.0 kN	UNI EN 846-7
Elastic tensile strength	$\sigma$	≥ 920 MPa	≥ 1045 MPa	≥ 1065 MPa	UNI EN ISO 6892-1:2016
Elastic modulus of the bar	$E_{bar}$	≥ 125 GPa	≥ 125 GPa	≥ 120 GPa	UNI EN ISO 6892-1:2017
Break warp	$\epsilon_{bar}$	≥ 4.8%	≥ 5.7%	≥ 3.9%	UNI EN ISO 6892-1:2018
<b>Pack ø 8 mm:</b>					
- 1000 mm		Box. pc. 25			
- 10 m		Roll			
<b>Pack ø 10 mm:</b>					
- 200 mm		Box. pc. 50			
- 500 mm		Box. pc. 25			
- 600 mm		Box. pc. 25			
- 800 mm		Box. pc. 25			
- 10 m		Roll			
<b>Pack ø 12 mm:</b>					
- 10 m		Roll			

## Warning

- Abide by any standards and national regulations
- handle the material while wearing protective clothing and goggles and follow the instructions on how to apply the material
- store in a dry place and away from substances that may compromise the integrity
- the product is an item according to the definitions of the EC Regulation No. 1907/2006 and therefore does not require a Safety Data Sheet
- for any other issues, please contact the Kerakoll Worldwide Global Service +39 0536 811 516



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in May 2025; please note that additions and/or amendments to this information may be made over time by KERAKOLL Spa; for the latest version, see [www.kerakoll.com](http://www.kerakoll.com). KERAKOLL Spa shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions of your building site and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.