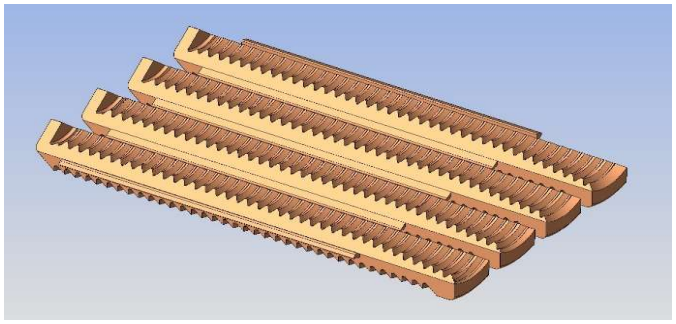
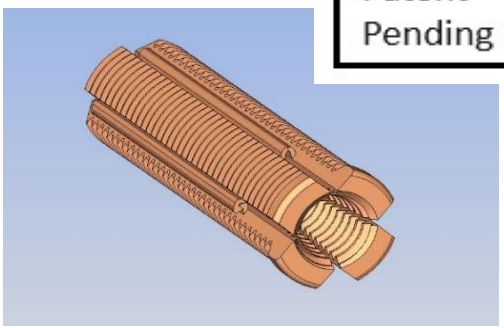
FROLM : Rollable fixing ROLLER for metric pitch screws

Patent Pending





Features

ROLLER fixings are designed to create non-through fixings using metric pitch screws. The type of thread allows a wide flexibility of applications as it is possible to draw on all the standardized products present on the fastening and bolts market (Hex head, Allen head, threaded rods,...) and as regards the materials (burnished, galvanized or stainless steel screws). At the delivery state, the anchor is open. Once the correct size hole has been drilled, the hole is cleaned carefully by blowing air inside. The ROLLER anchor must be rolled up to the reference position determined by the ends and inserted into the hole made on the fixing support.

Benefits

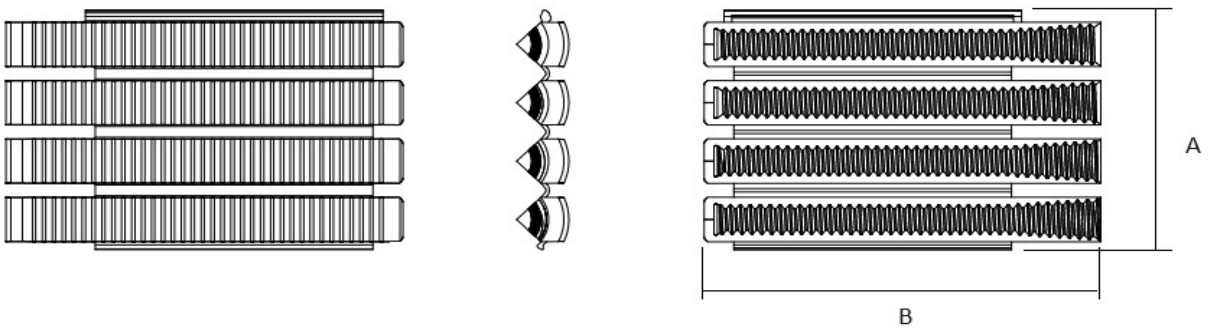
- Wide installation flexibility, so as to adapt the anchor to the fixable thickness desired, thanks to the wide range of metric screws (countersunk head, Allen head, hexagonal head, ...).
- Possibility of fixing threaded rods.
- High resistance performance to axial loads on all solid supports.
- High shear resistance performance thanks to the use of metric screws made from high-performance steel.
- Wide operating temperature range -40°C / +80°C.

Applications

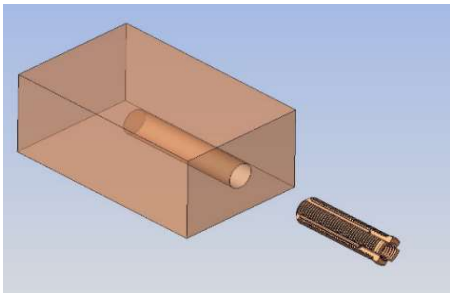
- Concrete.
- Bricks.
- Wood.
- Stones.

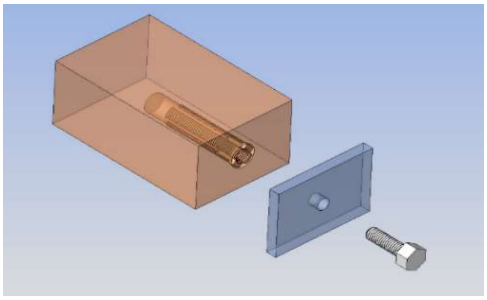
Material

Polyamide PA6 grey color RAL7035 , REACH and RoHS compliant.



Code	A	B	screw	Thread Pitch
	mm	mm		mm
FROLM4x30	16	31	M4	0,7
FROLM5x35	21	36	M5	0,8
FROLM6x40	27	41	M6	1
FROLM8x50	32	51	M8	1,25





Installation

1 - Check the dimensions of the support (length and distance from the edges) to ensure that the Anchor dimensions are correct.

2 - Make the hole of the correct diameter using the method indicated for the type of support.

3 - Drill deep enough to ensure that the expansion area of the anchor completely penetrates the support.

4 - Clean the hole site carefully. The presence of dust and loose materials reduces the sealing performance of the anchor.

5 - Roll the anchor and Insert it in the hole.

6 - Position the object to be fixed.

7 - Insert the screw and screw until the object is securely tightened.

Pull - out Recommended Loads

(1kN ≈ 100 kgf)

Data relating to the use of a screw with a length that engages the entire dowel

Code	Nracc - concrete C20/25	Nracc - brick	Drilling tool diameter	Minimum drilling depth	Screw penetration into the Anchor indicated
	Roto - Percussion drilling	rotation drilling			
	kN	kN	mm	mm	mm
FROLM4x30	0,24	0,23	6	35	30
FROLM5x35	0,30	0,28	8	40	35
FROLM6x40	0,60	0,55	10	45	40
FROLM8x50	1,20	0,90	12	55	50

The limit resistance values were determined through tests carried out in the BARTOLUCCI internal laboratory. The recommended values take into account a suitable safety factor under static load conditions in the described load condition. The resistance capacity of an isolated anchor to bending stresses is poor and therefore its application is not recommended.
If there are situations subjected to dynamic stress, the application must be tested for each specific case as it is very difficult to express general predictions.

Notes on Loads

The anchorage holding loads depend on the combination of the type of support.
The resistance capacity of an isolated anchor to bending stresses is poor, therefore its application is not recommended.
In cases where dynamic stresses are applied, the application must be tested for each specific situation.

Shear Recommended Loads

(1kN ≈ 100 kgf)

Shear performance is determined by the shear strength of the screw and the characteristics of the fastening support. As an indication, we report recommended values with a screw steel 8.8 .

Code	Vracc (resistance class 8.8) - Concrete C20/25	Vracc (resitence class 8.8) - Brick
	kN	kN
FROLM4x30	0,40	0,35
FROLM5x35	0,70	0,70
FROLM6x40	1,00	0,95
FROLM8x50	1,80	1,15

Warnings

Carefully clean the seat on the support after making the hole. Dust and the presence of loose material in the hole drastically reduce the sealing performance of the fastener. The penetration of the screw must be sufficient to generate a holding force. It is therefore recommended to pay maximum attention to the choice of the length of the screw and the thickness to be fixed.

The data reported correspond to our current technical and applicative knowledge for an appropriate use of the product and are to be considered, in any case, indicative and general, therefore not binding for the same. It is recommended to carry out a preliminary practical test in order to verify the suitability of the product in relation to the intended use, purpose and its use. The person in charge of the construction site is responsible for verifying the suitability and correct implementation of the products described in this document for the use and purposes it intends.

Notes for correct installation

The installation method significantly influences the sealing performance expressed by a dry fixing system.
DIAMETER AND EXECUTION OF THE HOLE. The diameter of the hole for housing an anchor is indicated in the technical data sheet. In practice, drills for building materials are almost always slightly larger: a diameter 6 drill has a 6.2mm drill insert. Furthermore, when drilling a building material (brick, concrete, ...) you generally do it with manual tools that do not have a support for perfect orthogonality of the tip to the surface. The poor stability of drilling operations can cause oscillations during the execution of the hole, the result of which could be an ENLARGED, CONICAL and/or OVALISED hole.
DIAMETER AND LENGTH OF THE SCREW. Since the expansion is determined by the insertion of a screw inside the plug, the interference that occurs between this and the internal diameter of the plug determines the expansion and therefore the sealing action of the anchor. Smaller diameters lead to lower expansions and therefore lower axial sealing performance. In terms of shear resistance, performance is generally determined by the screw used.
QUALITY OF THE SUPPORT. Since anchors are generally used to attach objects to various building materials, the quality and condition of the materials themselves is fundamental. For example, if the support material is CRACKED or has VOIDS, the sealing action of an expansion bolt would be compromised.
CLEANING OF THE HEADQUARTERS. Even if dry systems are less sensitive to the presence of dust and particulates inside the anchor installation site compared to connection systems that use adhesives and/or reactive resins, the installation hole must still be well cleaned before installation. insertion of the dowel. In fact, the presence of dust and particulates negatively influences adhesion and therefore the friction that will occur at the anchor/support material interface.

Packaging

Box with plastic part only

Code	Pcs / Box	Boxes / Carton	Cartons / Pallet	Pcs / Pallet
FROLM4x30	200	36	30	216000
FROLM5x35	200	24	30	144000
FROLM6x40	100	36	30	108000
FROLM8x50	100	24	30	72000

EURO Pallet 80x120 maximum height 1,95 m.

Bulk packaging

Code	Pcs / Carton	Cartons / Pallet	Pcs / Pallet
FROLMI4x30	30000	30	900000
FROLMI5x35	25000	30	750000
FROLMI6x40	12500	30	375000
FROLMI8x50	10000	30	300000

EURO Pallet 80x120 maximum height 1,45 m.

Handling :

Store in the original packaging in a covered and dry place.

Safety Instructions:

According to the current European regulations, the articles in question do not require a Safety Data Sheet (Reg.1906/2007/CE - REACH). During application, the use of gloves, dust mask and protective glasses is recommended. Follow the safety regulations in place in the workplace.