Double thread. Double power of properties and features.

New line of R-LX screw-in anchors from Rawlplug.

Genuinely effective, quick and lasting anchoring in cracked and non-cracked concrete or hollowcore slabs as well as in masonry substrates, brick or even timber proves to be an everyday challenge facing contemporary contractors and construction specialists, particularly when considering the growing requirements and increasing creativity of designers and construction engineers. Rawlplug has undertaken this challenge by developing and delivering the all new R-LX line of concrete screw anchors.

Fixing power guaranteed in strong arguments

What makes the R-LX concrete screw anchors from Rawlplug superior to the throughbolts so popular in many markets? They are functionally unique thanks to the patented and specially designed high-low type thread. The perfect combination of both thread profiles allows it to bite into the material and develop a truly reliable and lasting connection. The gist is that operation of concrete screws is not based on the expansion principle, but they undercut the substrate in order to be able to transfer increased loads. There is more to that, since the design of the screws enables them to evenly distribute the forces affecting them over the entire thread, even under increased loads. In practice, this means that force distribution in the substrate is analogical to that of elements embedded in concrete and resembles the resistance of reinforcement bars against the substrate.

And the effect? Rawlplug’s R-LX anchors attain the highest available load capacity compared to other anchors in the class.

Here is a handful of important facts about Rawlplug’s R-LX concrete screws:

- **Screw head markings** for easy post-installation identification
- **Special notches** on the washer bottom to provide for better grip
- **One-piece anchor** that requires no nuts and washers
- **Unique thread design** comprising robust primary thread for undercutting that ensures best-in-class load transfer capabilities
- **Secondary guide thread** to ensure even more secure attachment to substrate
- **Optimised tip** to ensure easier installation
- **Integrated washer** for fixing in larger boreholes
- **Screw head markings** for easy post-installation identification
- **6 head variants** for diverse applications

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**Rawlplug®**
Rawlplug has concentrated on innovation once again, and in doing so, created a truly original solution. The R-LX screws feature two separate threads with different pitch heights. The primary thread is responsible for the material undercutting, which helps in distributing the forces affecting it more effectively and decides about the anchor’s load capacity. The secondary lower thread enables anchor stabilisation during installation, while also increasing its resistance to shear loads. Both these structural features, i.e. the optimum double thread diameter and the special curvature, have been patented by Rawlplug, and it is for them that the product offers unique parameters and unparalleled functionality. While the Rawlplug R-LX screw-in anchors are installed, the borehole material is undercut, and at the same time the undercut grooves are filled with output. The secondary hydration that takes place in the process adds to the load bearing properties of Rawlplug’s screws, as they simply bond to the substrate.

Quality in details
The innovative design of Rawlplug’s R-LX concrete screw anchors has been developed by a team of dedicated experts – practitioners who cooperate on a daily basis to keep track of actual needs of construction professionals. In response to their expectations, the brand’s specialists had focused on developing an unprecedented, optimised forging and heat treatment process performed at one of Rawlplug’s European manufacturing plants. The solution owes its innovativeness to the finished product’s high steel class and possibility of multiple use, depending on the concrete substrate class and grain size.

Corrosion resistance – it matters!
The process we designed has additionally allowed us to eliminate the risk of what is referred to as hydrogen embrittlement which haunts contractors when they decide to use products made of high hardness carbon steel. Rawlplug’s R-LX screws are simply immune to hydrogen corrosion. Even in the basic version, the product offers high surface hardness parameters which significantly simplifies and facilitates installation in concrete. Moreover, the core remains flexible enough to avoid cracking while the stresses occurring in installation, dismantling or operation under load are transferred.

You should also keep in mind that Rawlplug’s R-LX screws have been designed in two variants, both conforming with the requirements of EAD’s option 1, and come with high-quality zinc electroplated finish or zinc-flake finish highly resistant to corrosion. The corrosion resistance parameters of the brand’s products have been confirmed in a salt spray chamber test. And the result was... 1,500 hours! This is an unprecedented result which evidences properties that no other carbon steel product can match.

Now it’s official
Rawlplug’s R-LX screw-in anchors meet all the relevant requirements of European Assessment Documents EAD 330232-00-0601, Part 3 (metal anchors for concrete – undercutting anchors) and EAD 330022-00-0601 as well as the guidelines laid down in part VI of ETAG 001. They are ready to use.

Spectacular spectrum of applications
Rawlplug’s R-LX screws are intended to be used in a truly wide range of applications – both highly specialised ones, since they offer impressive load transfer capabilities in cracked concrete, matching ETA option 1 requirements (suitability for use in expanded zone), and typical ones that involve multiple point installation and fixing, as per part VI of ETAG 001.
Already mentioned on several occasions, the specificity of design and characteristics of operation of Rawlplug’s R-LX concrete screws not only ensure increased load capacity, but also make it possible to maintain smaller than required axial and edge spacing, while all advantages of traditional expansion throughbolts are maintained. All these aspects combined imply that our anchor is in fact the number one product of choice, especially when facing massive anchoring needs, installing balustrades and railings, gates and fences, shelves, seats and benches in public spaces, steel cable ducts or structures, bumper rails, cladding restraints or sub-frames.

Patented design features of the R-LX screws from Rawlplug:

- Optimised double thread diameter
- Unique thread curvature
- Valuable in temporary applications, including formwork, barriers and fencing in construction sites or scaffoldings.

What about installation? It’s simple
Just drill a hole to a diameter slightly smaller than the screw itself by following the clear drill size guidelines provided in the screw product code. A hole thus prepared ensures appropriate screw guiding while its main thread will create precise undercutting of the substrate material as you screw it in. And since this is a one-piece fixing solution, you don’t need to use any washers or nuts. This is what gives a self-taping screw its proper meaning.

Say what you need
There is another reason why this product is truly worth your while. The R-LX line is very extensive, encompassing even highly specific requirements and satisfying the needs of professionals from all construction segments.

Rawlplug’s screws come with as many as 6 different head variations: hexagonal version with integrated washer, countersunk version for flush installation, internally threaded socket version, threaded rod version, cylinder head version and hexagonal version without integrated washer for temporary fixing. Additionally, each variant covers sizes from 5 to 14 mm and lengths of up to 200 mm.

Reliability and trust are matters of choice. So choose Rawlplug.
Rawlplug’s R-LX concrete screw is a genuine combination of state-of-the-art technology and 100-year experience in product development. It is the most highly advanced solution ensuring impressive use properties and efficiency. It is also not without relevance that it comes with a package of complementary services from Rawlplug’s portfolio, starting from technical consulting and specialised training, to comprehensive documentation. Check them all on rawlplug.com. We believe that the choice is very simple.