

# SAFETY FACTORS

## How is the safety factor calculated?

In order to guarantee your safety, each CODIPRO swivel lifting ring has to undergo a series of very strict tests:

- > Breaking tests;
- > Proof load tests at 2.5 x WLL;
- > Fatigue tests.

Calculation of the safety factor is based on the results of breaking tests. It is the ratio of the WLL (Working Load Limit) to the breaking test. For example, a ring with a WLL of 1 t with a 5:1 safety factor will have to obtain a breaking load of at least 5 t.

## CODIPRO favours the 5:1 factor

True to its values, CODIPRO has always favoured the 5:1 factor because it remains the best guarantee of quality and safety. This is why CODIPRO - GRADUP rings are engraved with the WLL of the 5:1 factor. In addition to enhanced safety, thanks to the 5:1 factor, our lifting rings can be used on every continent with no restrictions.

## 4:1 and/or 5:1 Safety Factor

CODIPRO now offers swivel lifting rings with two safety factors: 4:1 as well as 5:1.

In Europe, it is customary to use the 4:1 safety factor. Moreover, it is this factor which is specified in the EN 1677-1 standard. For the sake of clarity and transparency, CODIPRO approved all of its GRADUP rings to a 4:1 factor to allow the informed operator to use it under these conditions.

Along the same lines, in its load chart, CODIPRO gives values based on various load angles with factors of 5:1 AND 4:1 (see "Load Angle Chart" chapter).



Historically, CODIPRO rings with a diameter greater than M45 were already approved to the 4:1 safety factor. This is why GRADUP.DSS rings with a diameter greater than M45 are engraved with both WLL's of safety factor 4:1 and 5:1.

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