

# CERTIFICATION

Creator, designer and producer of high quality safety swivel lifting rings, Codipro wants to give its clients the best advice and develop with them customized solutions to ensure the safety of both goods and people.

## 1. Why an approval?

The Machinery Directive 2006/42/CE states that :

- > All the lifting equipment have to be CE marked;
- > A declaration of conformity and an instruction manual must be provided with each delivery;
- > The manufacturer must be clearly identified.

### 2006/42/CE European directive extract

#### Scope

**This Directive applies to the following products:**

- a) machinery;
- b) interchangeable equipment;
- c) safety components;
- d) lifting accessories;
- e) chains, ropes and webbing.

#### Mechanical strength

Machinery and lifting accessories must be designed and constructed in such a way as to prevent failure [...] Strength calculations must take account of the value of the static test coefficient chosen to guarantee an adequate level of safety. That coefficient has, as a general rule, the following values:

- a) manually-operated machinery and lifting accessories.

#### Lifting accessories and their components

Lifting accessories and their components must be sized [...].

Moreover:

- a) all metallic components making up, or used with, a sling must have a working coefficient chosen in such a way as to guarantee an adequate level of safety; this coefficient is, as a general rule, equal to 4;
- b) in order to verify that an adequate working coefficient has been attained, the manufacturer or his authorised representative must, for each type of component perform the appropriate tests or have such test performed. [...].

The CODIPRO swivel lifting rings are in all respects consistent with the legislation.



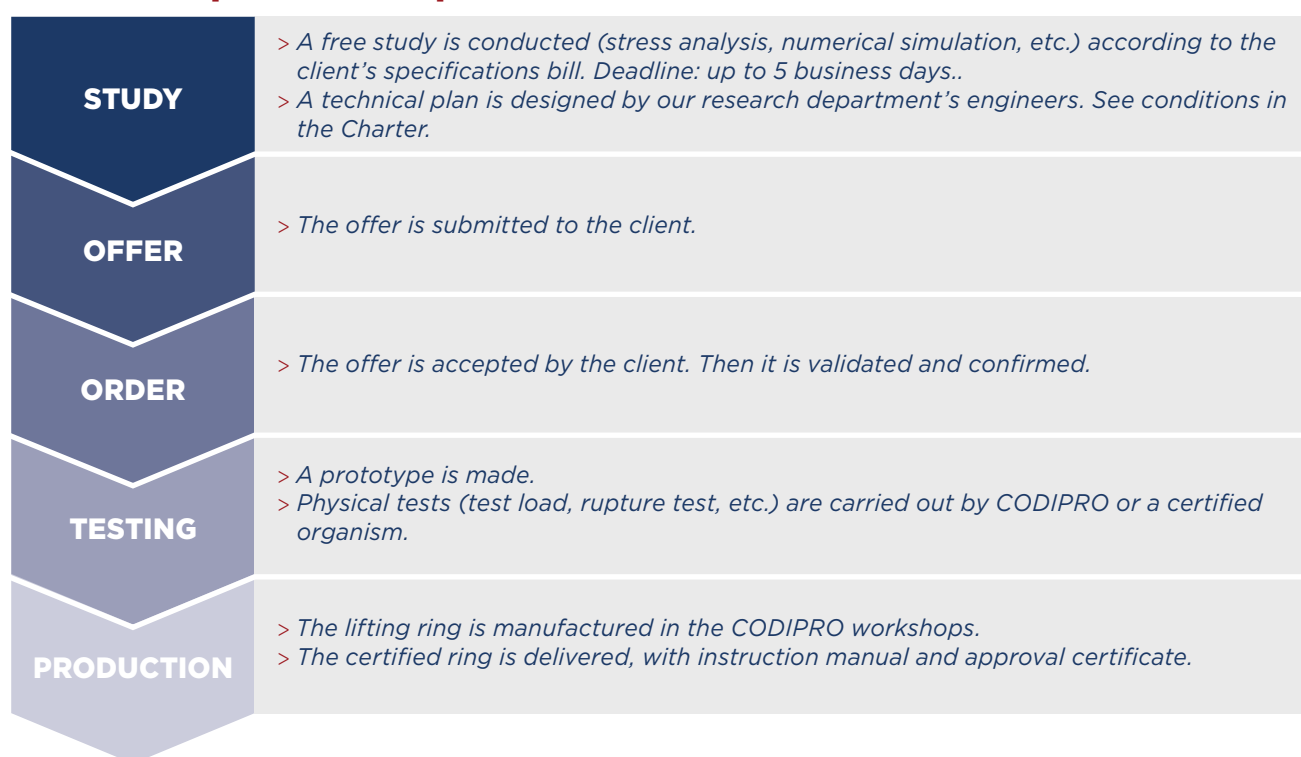
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## 2. When is an approval necessary ?

All the lifting rings manufactured by CODIPRO are approved :

- > The standard lifting rings are approved according to the European directive 2006/42/CE. Moreover they are tested and produced according to the EN1677-1 standard;
- > The non-standard lifting rings are approved according to the Machinery Directive 2006/42/CE.

## 3. How is a specific order processed ?



## 4. How exactly is the approval carried out ?

### > Study of the technical feasibility

Engineers from the CODIPRO research department study the client's specifications bill and design a model (stress analysis, numerical simulation, etc.).

### > Tests or calculation notes taking into account :

- The result of the test load;
- The resistance to destruction;
- The fatigue.

### > Edition of the tests reports

### > Writing of a certificate of conformity taking into account the following items :

- Safety coefficient consistent with the Machinery Directive 2006/42/CE ;
- Individual traceability;
- Cracks checking.