

# The solution for an optimal cementing of a prosthesis

## General

The C~plug is a resorbable bone cement plug or cement restrictor. The purpose of cement restrictors is to seal the medullary canal, thus enabling optimal cementing of a prosthesis. Adequate cement filling has proven to be essential to the success of long-term joint replacement.

Important requirements for successful surgery are a clear-cut cement interface and the absence of cement flow beyond the plug. Also, it is crucial that the distal pressure which is applied during insertion should be as low as possible. This depends to a large extent on the insertion technique, which in turn depends on the properties of the cement plug and the instrument set that are used. The C~plug and the compatible instrument set offer some major improvements compared to the currently used equipment.

## Design

The basic design of the C~plug is similar to that of existing devices. It is a cylindrical plug with three rings, or skirts, seated on a base. In the base is a hole in which the plug carrier can be inserted. The diameter of the plug corresponds to two thirds of its height (see picture).

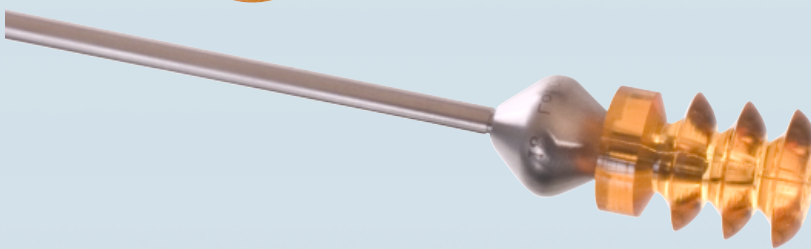
## What does the C~plug have in common with other cement plugs?

The design of the C~plug is based on the cement restrictors that are currently considered the best on the market. With these devices it shares the following properties:

- A similar, but not identical, design
- It is resorbable: total resorption by the body within days.
- A classical, often-used chemical composition
- It is non-allergenic

## Design advantages of the C~plug

C~plug has many major design enhancements compared to the cement plugs currently in use.



## 1 The Peak Pressure Release System (PPRS®)

This is a small aperture (560 µm) in the distal part of the plug. This aperture functions as an air vent that allows air to be released. This has the following main advantage:

- It greatly reduces distal pressure that is needed to insert the plug (as low as 300 millibars). Lower distal pressure limits the risk of a fat embolism because it avoids marrow content being forced into the vascular system during insertion.