

# xl-surgical solutions

Acrylic Bone Cement, Disposable  
Syringe Kit & Cement Gun



XLO, established in 1992, has emerged as a pioneering force in the field of orthopaedic implants. The company is dedicated to enhancing patient outcomes and improving quality of life through innovative solutions in orthopaedics.

With a strong emphasis on quality and precision, **XLO a US FDA, CE, ISO13485:2016, WHO:GMP, ISO 9001:2015 & Indian FDA** has positioned itself as a leader in the design, development, and manufacturing of advanced orthopaedic implants.

XLO offers the most extensive range of Cementless & Cemented Joint Replacement Implants, Trauma Implants, 3d Printed Patient Specific Implants & Instruments along with Bone Cement with a state-of-the-art manufacturing facility located in New Delhi, India. This facility is equipped with advanced technology that supports the production of high-quality orthopaedic implants while adhering to strict regulatory standards.

The company has established a pan-India presence, ensuring that its products are accessible across the country. Furthermore, XLO exports its innovative solutions worldwide, contributing significantly to global healthcare advancements in orthopaedics.





# PEARL

ACRYLIC BONE CEMENT

Bone cements have been used very successfully to anchor artificial joints for more than half a century.

- Liquid Monomer
- PMMA Powder

## XL-Pearl Bone Cement "I" (Standard Viscosity)

Non- Antibiotic	Antibiotic
5001-GM-40	5001-GMAB-40

## XL-Pearl Bone Cement "III" (Low Viscosity)

Non- Antibiotic	Antibiotic
5003-GM-40	5003-GMAB-40

*Available in:*  
Antibiotic & Non Antibiotic



## Pearl line of PMMA bone cements (with and without Gentamicin)

Ever since the first implantation of a total hip replacement using a PMMA cement in the 1950's, using bone cement is considered a golden standard in joint arthroplasty, with an established track record of clinical success and excellence.

Our PMMA bone cements are available with and without added antibiotics (Gentamicin) and in two different viscosities to match surgeon preferences.

All our cements comply with or even exceed the International ISO 5833 Standard for PMMA bone cements.



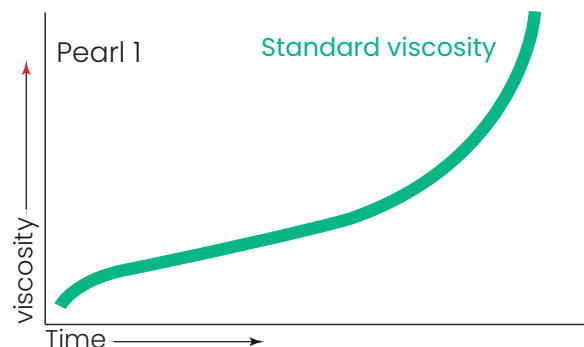
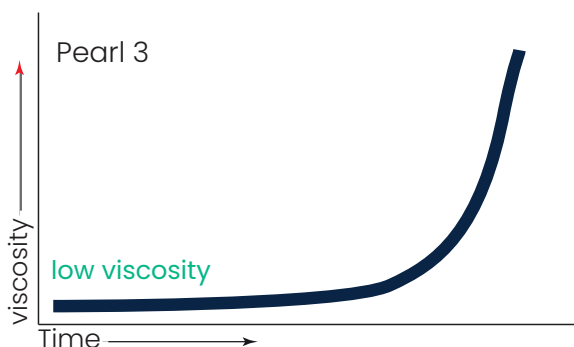
- Marketed in more than 60 countries since 2000 <
- Mechanical properties exceed the International ISO 5833 Standard <
- Two different viscosities for various applications <
- Short waiting time and efficient application time <
- Stable and easy to use packaging: liquid in an ampoule and powder in a bottle <
- Meets leading European and international standards <

## Viscosity

Viscosity is an essential handling property for surgeons. To match the needs and preferences of different surgeons, we supply both standard and low viscosity bone cements, offered with and without antibiotics.

Pearl 3 is our low viscosity bone cement, which is initially more liquid, whereas Pearl 1 is our standard viscosity cement and initially slightly thicker.

All cements comply with the International ISO 5833 Standard for PMMA bone cements, which defines the physical, mechanical, packaging and labeling requirements.



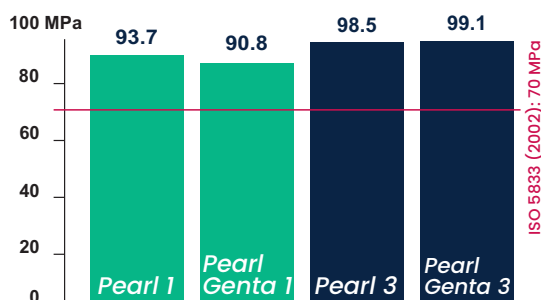
## Mechanical properties

Mechanical properties are essential as they influence the connection between the bone and bone cement. Cement has an important task of uniformly distributing the impacting forces as evenly as possible.

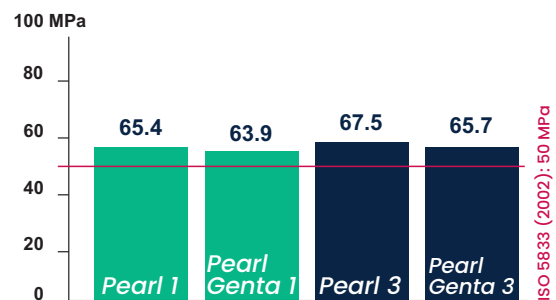
This transfer of forces ensures long-term stability of the implanted cement and any prostheses.

The mechanical strengths of all XLO Pearl cement correspond to those listed in the International ISO 5833 Standard.

### Comprehensive Strength



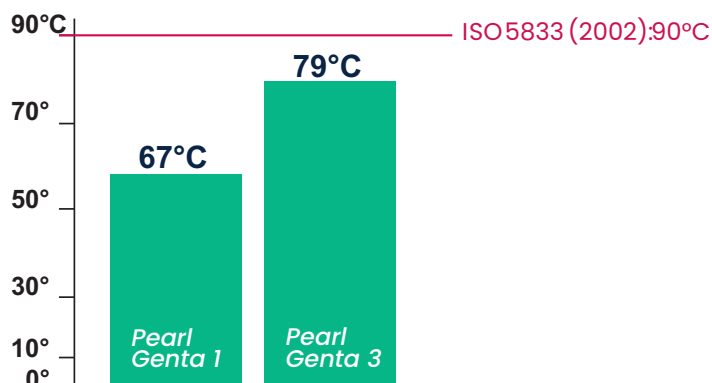
### Bending Strength



## Low hardening temperature

Polymerisation of PMMA bone cement is an exothermic chemical reaction, during which the cement hardens and the temperature increases.

### Peak exothermic temperature of Pearl Genta



In order to prevent necrosis of surrounding tissue, the International ISO 5833 (2002) Standard places a limit of 90°C on the hardening temperature of bone cements.

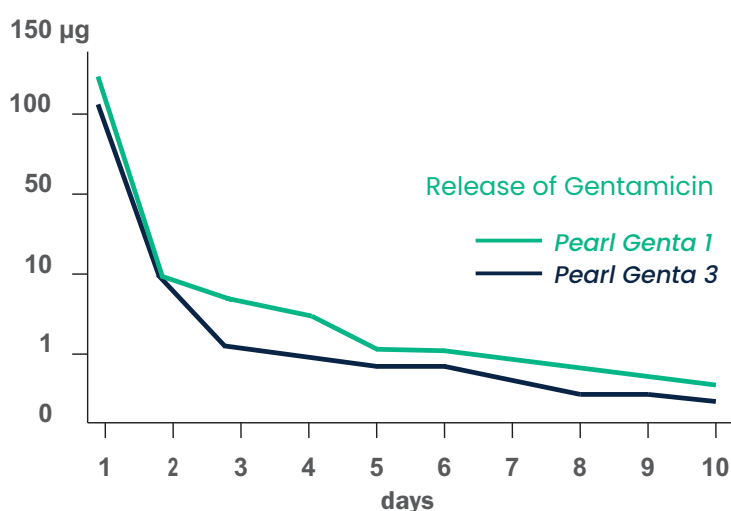
The peak exothermic temperature of XLO Pearl Genta variants is well below this limit.

## Antibiotic bone cements

Most frequently used bone cements contain Gentamicin, an antibiotic covering approximately 75% of all bacteria-based pathogens. Adding Gentamicin to bone cements prevents the adherence of bacteria to the cement surface and surrounding tissue, reducing the risk of bacterial growth and infection.

XLO Pearl Genta 1 and Pearl Genta 3 include added antibiotics for local antibiotics. To ensure effective antibiotics without compromising the mechanical strength of the product, we limit the amount of antibiotics to 3-4% of the total powder volume.

Pearl C-ment offers a high initial release of antibiotics that steadily decreases over time. The burst release initially reduces the risk of resistant bacterial strains while the extended release helps maintain physiologically relevant local concentration of antibiotics needed for sufficient prophylaxis.





# xl-cement

DISPOSABLE

SYRINGE KIT

Single use cement dispenser with specially designed 'Economiser Rod'.

It is a single use cement dispenser which is very handy to deliver the cement in the areas difficult to reach by a hand of fingers. Least wastage of the cement is achieved by specially designed 'Economiser Rod' provided with the kit.

- Mixing and transfer without any monomer fumes
- Easy mixing, reproducible, homogeneous and fast: 1min
- Direct cement transfer into the syringes
- No contact between cement/operator
- Injection volume up to 15cc
- Minimal cement lamination achieved by controlled cement extrusion

*Item Code:*

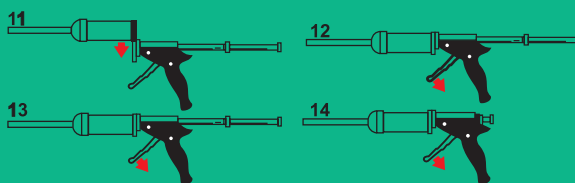
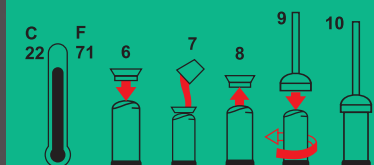
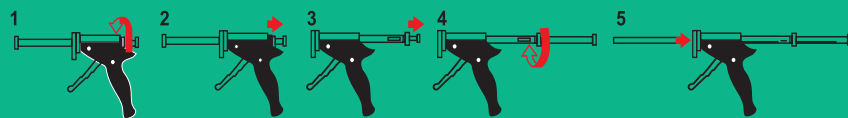
**5005-CSY-40**



# xl-cement gun

A Straight forward and reliable set, designed for the mixing and injection of acrylic bone cements during orthopaedic surgery procedures.

## Diagrammatic Illustrations

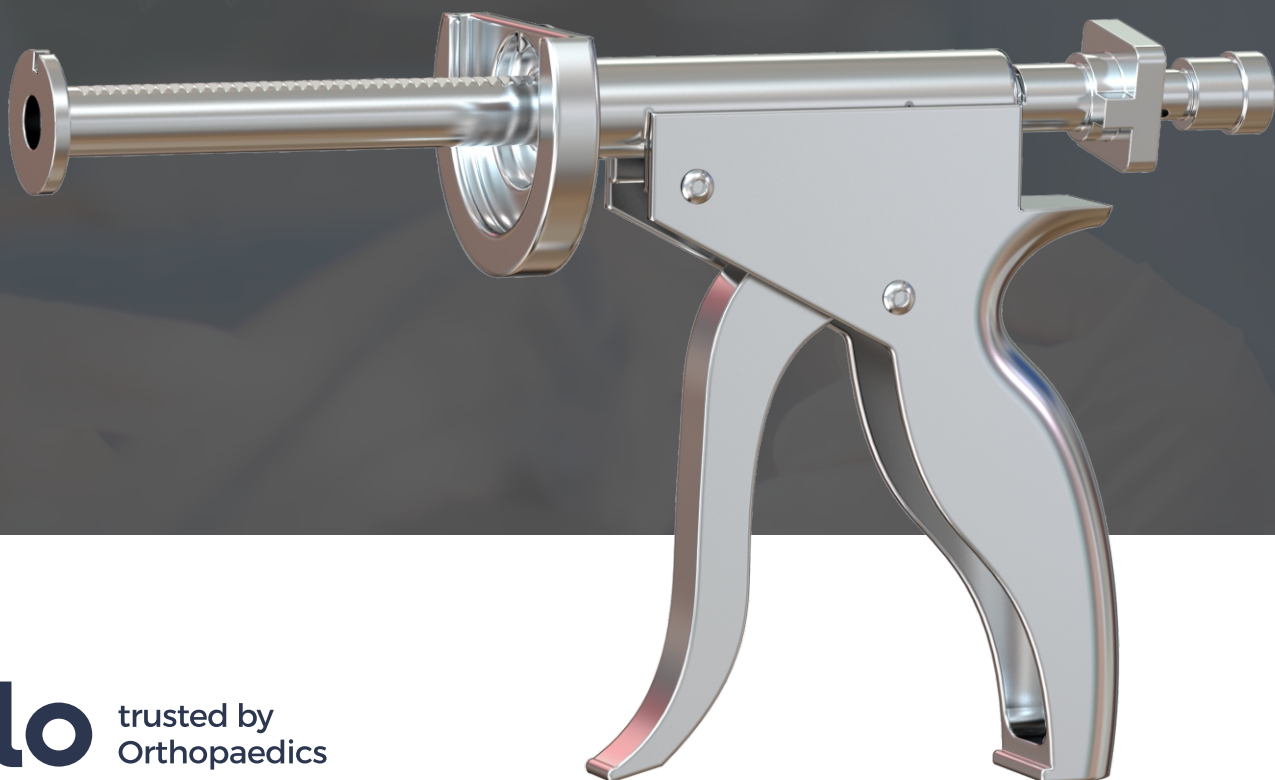


### IMPORTANT:

Please Insure that Cement restrictor/bone block is properly fitted in the intramedullary Canal.

Item Code:

**5005-GUN-40**





**pain was past**

make pain free life your future



**33** *Years of*  
Dedication

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