



ORTHOPAEDIC™

Innovation



A MEDSMART SOLUTIONS FAMILY MEMBER



# MEDSMART<sup>TM</sup>

## Solutions

**UK based Orthopaedic Innovation Limited are a global company committed to providing you with a wide array of exciting new products and technologies. Through design, creation and improvement, we manufacture and supply highly innovative orthopaedic products with exceptional service.**

We work closely with you to fully understand your needs and take pride in being able to supply solutions to meet your specifications and the expectations of your patients. Our expertise has developed through many years of working closely with surgeons and healthcare professionals throughout the world.

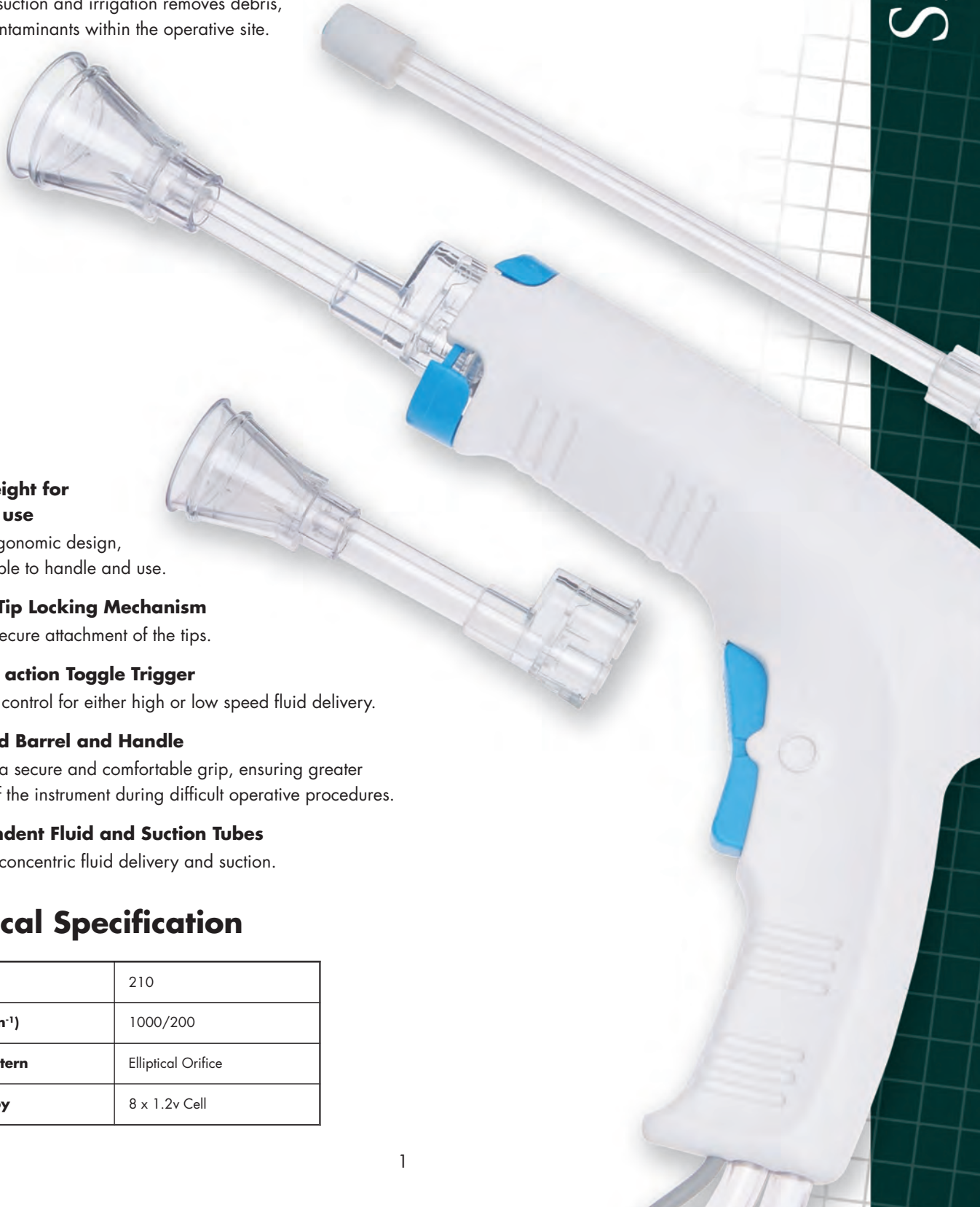
The Smartpulse<sup>TM</sup>, SmartPower<sup>TM</sup> Disposable Power Tools, BioSpacers<sup>TM</sup>, MixoCem<sup>TM</sup> Cement Application System, FixoCem<sup>TM</sup>, BioPlugs<sup>TM</sup> and DBM Allograft featured in this brochure are just seven complimentary products from our extensive growing range.

**Orthopaedic Innovation** is part of the Medsmart Solutions family of companies.

**The Smartpulse™ is a versatile instrument which combines convenience and twin speed power for the removal of necrotic tissue, bacteria and foreign material whilst providing controlled pressure for efficient cleansing and irrigation.**

Lightweight and portable, this single use system is supplied in a double sterile pack. Each pack contains a lightweight hand piece complete with two tips, including a dual cone splash shield tip for optimal fluid containment to control the dangers associated with transient spray.

The easy set up system is battery powered and features trigger controlled twin pressure settings to deliver either a powerful cleaning action or a more gentle lavage for soft tissue. Concurrent suction and irrigation removes debris, fluid and contaminants within the operative site.



- **Lightweight for ease of use**  
Sleek, ergonomic design, comfortable to handle and use.
- **Secure Tip Locking Mechanism**  
Ensures secure attachment of the tips.
- **Smooth action Toggle Trigger**  
Fingertip control for either high or low speed fluid delivery.
- **Textured Barrel and Handle**  
Provides a secure and comfortable grip, ensuring greater control of the instrument during difficult operative procedures.
- **Independent Fluid and Suction Tubes**  
Provides concentric fluid delivery and suction.

## Technical Specification

<b>Weight (g)</b>	210
<b>Flow (l/min<sup>-1</sup>)</b>	1000/200
<b>Nozzle Pattern</b>	Elliptical Orifice
<b>Powered by</b>	8 x 1.2v Cell

# Disposable Power Tools

**Reliable, convenient and cost effective, the SmartPower™ range of completely disposable, pre-sterilised power tools are a cut above the rest, providing power on demand wherever and whenever you need it.**

Lightweight, easy to handle and never found wanting, the SmartPower™ range is ready to use 'fresh out of the box.' No equipment set up or preparation is necessary and the problems of costly maintenance, re-sterilisation and shipping are solved.

- **SmartPower™ Oscillating Saw**

Lightweight, allowing for optimal manoeuvrability as well as minimising wrist fatigue, this saw is ideal for use in orthopaedic osteotomies and other bone cutting procedures.

- **SmartPower™ Reciprocating Saw**

Designed for use when performing transverse osteotomies such as cutting off the head/neck of the femur during total hip procedures, general orthopaedic osteotomies and other bone cutting procedures.

- **SmartPower™ Sternum Saw**

Weighing only 32oz, this saw provides the user with greater flexibility and mobility.

- **SmartPower™ Drill**

Perfect for drilling holes and placing bone screws in a variety of reconstructive and trauma procedures.

- **SmartPower™ Reamer**

For use in orthopaedic procedures which require boring, drilling and reaming, the SmartPower™ Reamer is ideal for difficult procedures where continuous power is critical.



# Disposable Power Tool Accessories

The SmartPower™ Disposable Power Tool range is complimented by a comprehensive inventory of accessories from power consoles to a multitude of chucks, blades and bits.



SmartPower™

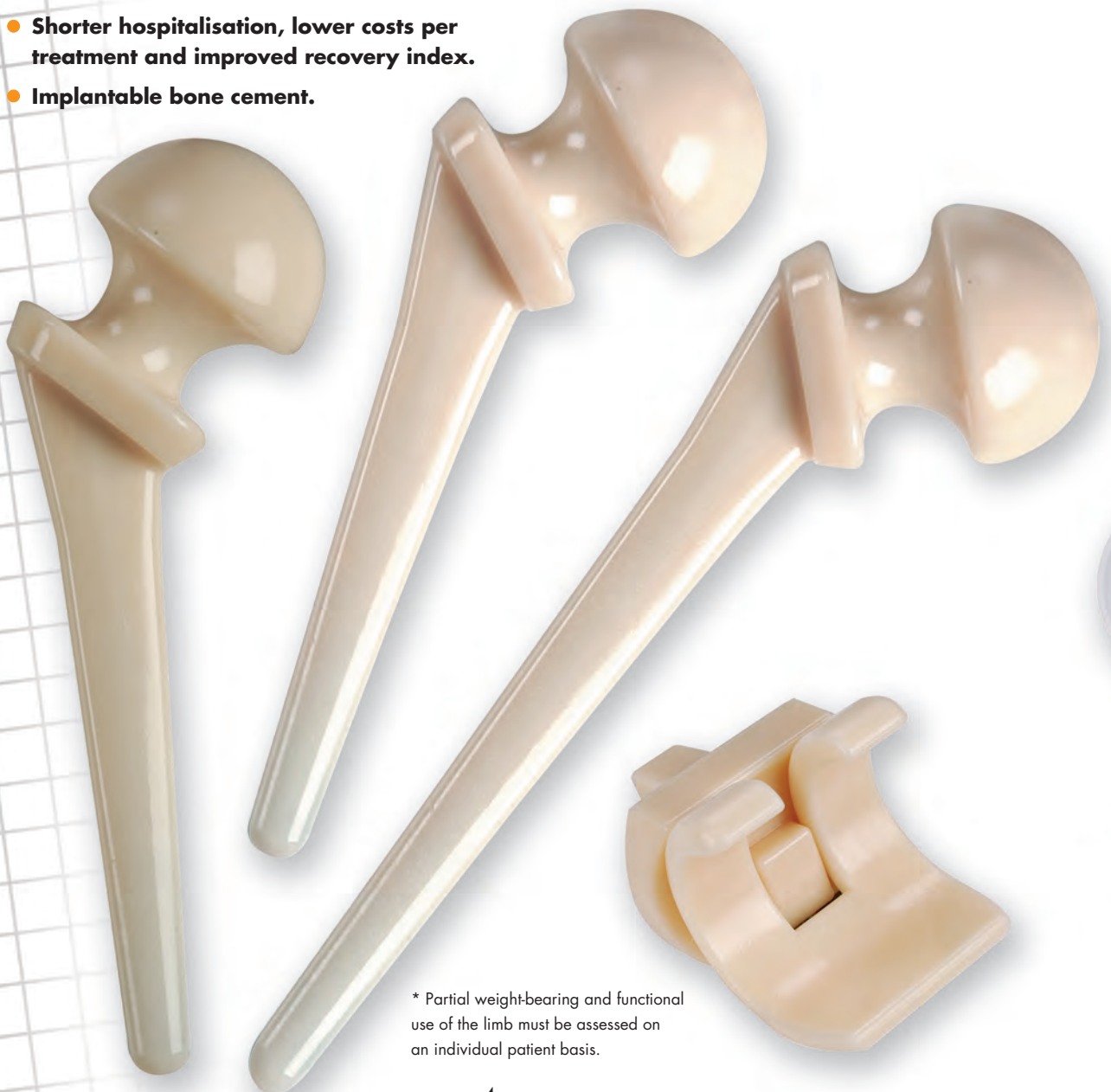
## Cement Spacers

**Orthopaedic Innovation BioSpacers™ are an innovative and highly effective device designed to help overcome arthroplasty infections, whilst maintaining mobility and quality of life for the patient.**

These temporary, implantable devices – which incorporate Gentamicin – are used to provide a replacement for a joint prosthesis which has been removed as a result of a septic process. They release antibiotic into the surrounding tissues to help the treatment of infected total joint replacement and facilitate successful re-implantation of the definitive prosthesis.

Orthopaedic Innovation BioSpacers™ are made from Orthopaedic Innovation Bone Cement and the Hip Spacer is reinforced with a Stainless Steel (316L) insert to enhance strength. All our spacers feature highly polished surfaces to prevent lesions to joint surfaces and various models and sizes are available.

- **Maintenance of joint space, mobilisation and limb length.\***
- **Effective in-situ release of high local antibiotic dosage, with reduced systemic effects.**
- **Homogeneous distribution of antibiotic in the cement.**
- **Eventual easier re-implantation of the definitive prosthesis.**
- **Improved quality of life between surgeries.**
- **Shorter hospitalisation, lower costs per treatment and improved recovery index.**
- **Implantable bone cement.**



\* Partial weight-bearing and functional use of the limb must be assessed on an individual patient basis.

# Cement Application

MixoCem™

**The MixoCem™ Cement Application System is a simple and efficient bone cement mixing system which does not require a vacuum and therefore allows you greater freedom to concentrate on more complex operational procedures.**

It is a closed system which eliminates the need to mix the cement separately and then fill the applicator. The cement is mixed inside the applicator cartridge by means of a paddle. This process mixes the cement perfectly to a consistency that can normally only be achieved with the use of an external vacuum mixing system.

Once the mixing is complete the operator removes the paddle, loads the cartridge into the applicator and determines the length of the applicator nozzle by breaking it at one of two marked points. The cement is then ready to be applied as required.

Simple and effective from start to finish.



**Orthopaedic Innovation FixoCem™ offers convenient mixing characteristics and excellent mechanical properties and can be used in conjunction with the MixoCem™ Cement Application System or other vacuum or hand mixing systems.**

Available in four different preparations, FixoCem™ differs with respect to viscosity and the presence or absence of Gentamicin prophylactic antibiotic. PR1 and PR1G are standard viscosity cements intended for manual use whilst PR3 and PR3G are low viscosity cements for syringe use.

All four cements are manufactured in compliance with the EEC Guidelines 93/42/CEE, ISO 5833:2002 and ISO 13485:2003 and are radiopaque and sterile.



- **Fast mixing**  
After the monomer liquid and the polymer powder are brought together, the time to obtain a homogeneous dough is only 30 to 60 seconds.
- **High precision dosage**  
The dosage of the components is manufactured with great precision. This guarantees equal mixing characteristics across all batches.
- **Well-suited for vacuum mixing systems**  
The low viscosity cements PR3 and PR3G are tailor-made for these systems.
- **No air bubbles**  
The resulting cement is free of agglomerates and entrapped air bubbles.

### Technical Specification

<b>Monomer</b>	Methyl Methacrylate, N, N dimethylparatoluidine Cupric Chlorophil, Hydroquinone.
<b>Polymer</b>	Methyl Methacrylate Copolymer and Methyl Acrylate. Contains Cupric Chlorophil.
<b>Powder-Liquid Ratio</b>	68% - 32% (40 gr powder - 20 ml fluid)
<b>Mixture and Dough Properties</b>	Similar mixing times, dough characteristics and curing times as Palacos® R.*
<b>Resistance to flexion, flexion module, resistance to compression</b>	Same values as Palacos® R* according to ISO 5833. Similar polymeric and granulometric composition.
<b>Opacifier</b>	10% Barium Sulphate

\* Palacos® R is a Registered Trade Mark of Heraeus Medical GmbH, Germany

**Adequate cement filling has proven to be essential to the success of long-term joint replacement. The Bioplug resorbable bone cement plugs or cement restrictors, seal the medullary canal thus enabling optimal cementing of a prosthesis.**

Orthopaedic Innovation BioPlugs™ have many advanced features including:

- **The Peak Pressure Release System (PPRS®)**

The Bioplug has a small aperture (560µm) in the distal part of the plug which functions as an air vent, allowing air to be released greatly reducing the distal pressure.

In addition to a lower distal pressure, the PPRS also helps in balancing the pressure distribution on the device, allowing more accurate positioning and a more clear-cut cement interface ensuring a tighter fit in the canal.

- **Unique three ring design**

The three ring design of Orthopaedic Innovation BioPlugs™ is designed to increase the contact surface in the canal to ensure accurate stable placement in the canal during cement insertion.

- **Conical insertion hole**

The conical shape of the insertion hole in the Orthopaedic Innovation BioPlugs™ eliminates any traction force on the plug when the instrument is withdrawn. This further reduces the distal pressure which in turn ensures the plug is not pulled along backwards whilst the instrument is being withdrawn.

- **Improved instrument set**

The innovative design of the instrument set allows the user to measure the femoral canal and to insert the plug with the same device.

The instrument set consists of six devices (8, 10, 12, 14, 16 and 18 mm) which correspond to the size of the plug. They are also supplied in a tray, designed for steam sterilisation.



## Technical Specification

<b>Sizes:</b> 8, 10, 12, 14, 16 and 18 mm.
<b>Chemical Composition:</b> Gelatine, Glycerol and Water.
<b>Sterility:</b> Sterilised in its double blister package by gamma radiation (minimum of 25 kGy).

## **Orthopaedic Innovation Limited**

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