

VBM- DEDICATED TO ORTHOPAEDIC IMPLANTS



-VBM-

ORTHOPAEDIC POLYMERS

ARE YOU A MEDICAL DEVICE MANUFACTURER?

Are you looking for a company which
produces polymer implants using
injection moulding?

WE SUPPORT YOU IN:

- » Selecting the implantable polymers.
- » Developing moulds.
- » Producing your implants.

YOUR CONTRACT INJECTION MOULDING
PARTNER FOR ORTHOPAEDIC IMPLANTS

WWW.VBM.FR

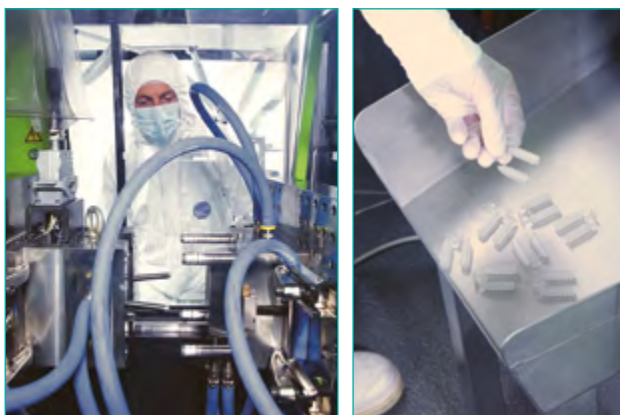
VBM- YOUR PARTNER FOR CONTRACT INJECTION MOULDING OF YOUR IMPLANTS IN ORTHOPAEDIC POLYMERS

ACTIVITY

► Selection of implantable polymers: bioresorbable materials: PLLA, PDLLA, PGA... and mixed materials: HA, TCP, bioglass mix. PEEK. PMMA. PE...



▲ Mould development.



▲ Production of implants by injection moulding.

PRODUCTION EQUIPMENT

- » Dedicated injection area.
- » 25 ton injection moulding machine with surrounding equipment (dryer, cooler, re-heater...).
- » Laminar flow class.
- » Control laboratory.
- » Up and downstream storage in cooling cabinet.
- » 35 ton injection moulding machine with micro injection unit.
- » Surrounding equipment dedicated to peek.



VBM ORTHOPAEDIC POLYMERS HISTORY

VBM was created in 1998 by FORECREU, world leader in cannulated bars in stainless steel and titanium alloys for the manufacture of instruments and medical implants, founded in 1952.

In 2004, VBM moved to the historic site of the FORECREU group within the new production unit of the BIOMETAL division located in Commeny-Malicorne (France).

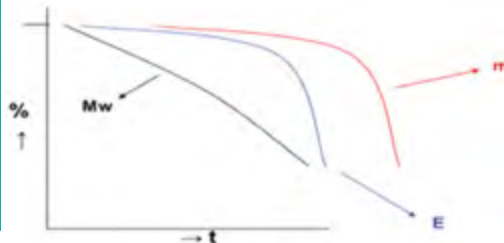
RAW MATERIALS

RESORBABLE MATERIALS

The terminology of “bioresorbable polymers” covers several polymer families. The polylactides and polyglycolides are the most used in surgery. Under normal physiological conditions, they are hydrolysed in nontoxic degraded products (lactic and/or glycolic acids) easily metabolized and eliminated by the body under CO₂ and H₂O.



Mw = molecular weight
E = mechanical property
m = mass



PHYSIOLOGICAL COMPATIBILITY

All these polymers are well tolerated and do not present any toxicity for the organism. Numerous tests on animals but also clinical studies show this with polyesters on lactic and glycolic acids based.

BTCP MIX

Beta Tricalcium Phosphates (BTCP) are osteoconductive materials that help to restore the bone tissue when in contact with the bone.

BIOGLASS

Bioglasses are silica based materials, containing calcium and phosphates, which favour the osteointegration.



NATURAL PEEK / CARBON FIBER REINFORCED (CFR) PEEK

PEEK is a semi crystalline aromatic polymer, biocompatible and used in permanent implants. It can be charged with carbon fibres in order to improve its mechanical characteristics.

The main advantages are:

- » Excellent mechanical performance
- » High wear resistance
- » Possibility of repeated sterilizations with all current techniques without affecting the performance
- » Total or partial x-ray transparency
- » Biocompatibility
- » Elastic modulus closed to human bone



PMMA

Polymethylmethacrylate mainly used for the manufacturing of centralizers or spacers for cemented hip joints.



OUR PRODUCTION

PROCESS

VBM- A COMPANY EXCLUSIVELY DEDICATED TO IMPLANTABLE POYMERS



VBM- A HIGH TECHNOLOGY PROCESS FOR INJECTION MOULDING OF ORTHOPAEDIC POLYMERS

- » Development and production of the moulds with a network of regional partners.
- » Injection and packaging under laminar flow class ISO 5.
- » Integrated control laboratory.
- » ISO 9001 and 13485 certification.



PRODUCTS

VBM- A COMPANY EXCLUSIVELY DEDICATED TO IMPLANTABLE POLYMERS

INJECTION OF ORTHOPAEDIC POLYMERS

- » Ligament screws.
- » Plugs and centralizers for hip implants.

- » Anchors.
- » Fixations for soft tissues.



QUALITY



ISO 13485 and 9001 by LNE G-MED



-VBM- ORTHOPAEDIC POLYMERS

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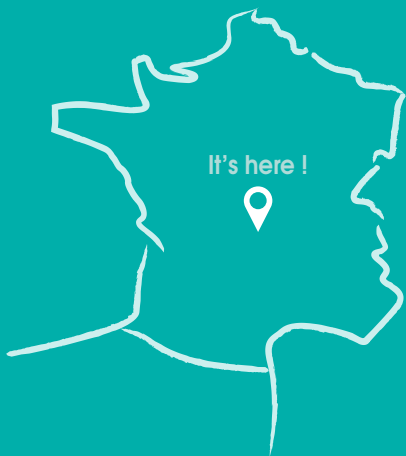
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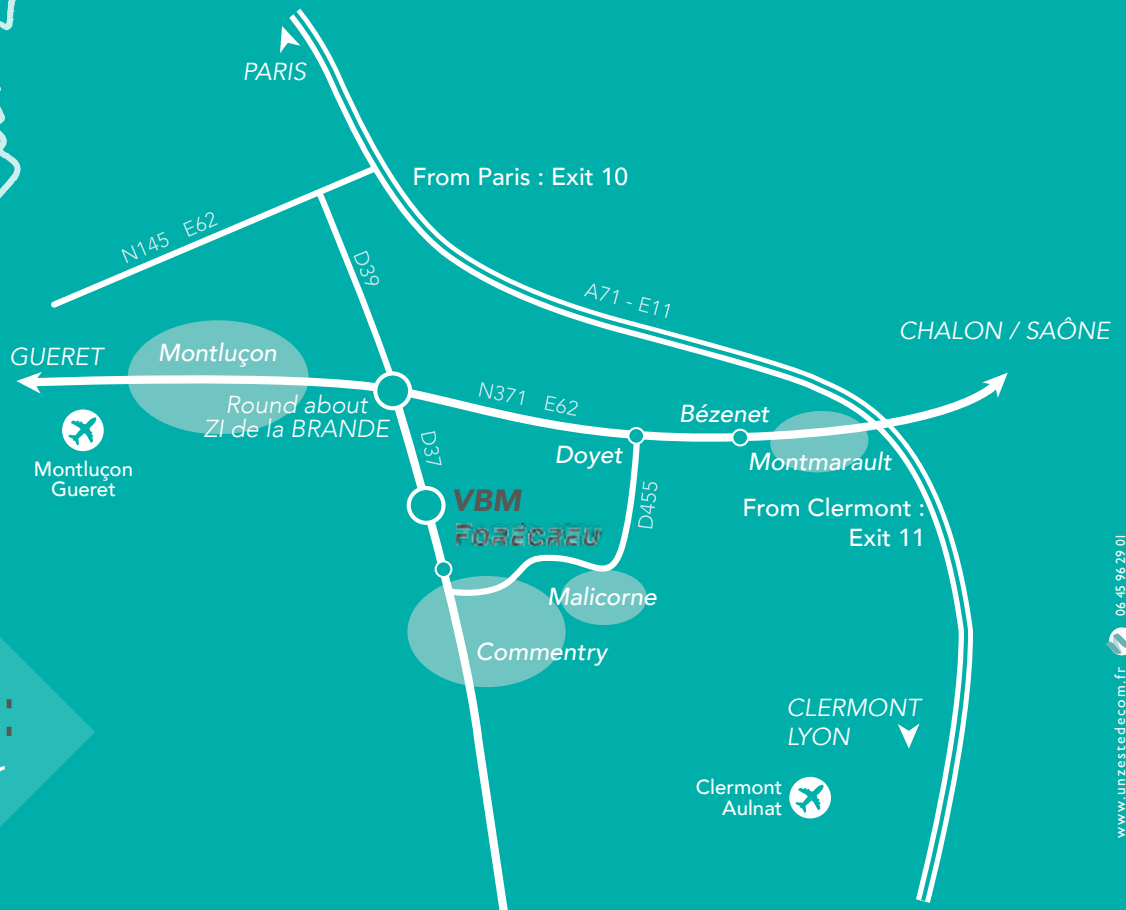
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HOW TO COME TO VBM



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www.vbm.fr