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Bluewater Medical

Bone Innovation Summit

February 13th and 14th, 2019

Company Profile

Bluewater Medical is

- A German-Swedish, international-acting, medical device company.
- Specialized in product development for trauma and spine applications.
- Developing own product ideas for fractures within the elderly population.
- Product development for companies and surgeons; inventors for the implementation of their product ideas.
- Consulting in innovation & portfolio management; from idea assessment through to feasibility studies and up to the introduction of serial production.

Get results faster

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Ranging from individual start-ups to multinational organizations.
We assist in the development of ideas and products for future growth.

aap

acumed

BACK BONE

CG TEC
Innovative Faserverbund Technologie

createc.com
Engineered Plastics

Customers

LINK

Medacta International

Medizin-Mechanik-Nord GmbH

Swemac

WOM
A Novanta Company

Own product ideas

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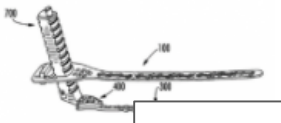


US 7,648,508 B2

Bone Plating

US 8,142,485 B2

Bone Plating

REFERENCES & PATENTS

Since its foundation in 2014 Bluewater Medical has submitted a number of patent applications.
Here we disclose the recently published documents.

FLEXIBLE SCREWDRIVER

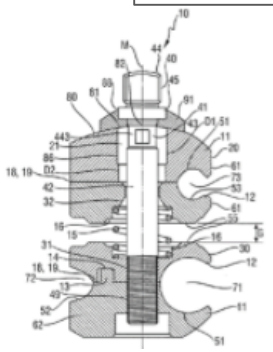
Bluewater Medical has developed and successfully tested a novel solution that significantly improves upon the state of the art.

Read more

OSTEOSYNTHESIS IMPLANT

This application relates to a new manufacturing method with the goal to significantly reduce the manufacturing costs.

Read more

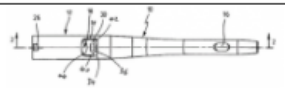


US 9,295,492 B2

External Fixation

Fixation Clamp

Fixation Clamp further improved. I can clamp multiple diameters on each side of the clamp, and to facilitate the cleaning process it can be dismantled without tools.



US 7,763,022 B2

Intramedullary Nailing

Locking Nail For Treating Fractures Of The Proxi

A special geometry around the inlet opening for th that reduces the stress in that region which allows the outer diameter but reaching equal fatigue strer same time.

Northopedics & Bluewater

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What is Northopedics

- It is a cluster of companies and institutions
- It is not a source for funding, but for support

Bluewater Experience

- Support in the search for public funding
- Local grant application (BFEI) at WTSH
- Crossloc Fracture Fixation
- CFR Reamer Shaft

Distal Radius Fractures

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State of the Art

- Most common fracture
- 50% instrumented
- Nearly 100 % volar or dorsal plates
- 23 A2, A3 and B1
- 2/3rd of the instrumented fractures
- More than 150 different distal radius plates

However

- Substantial number of complications
- 5% tendon complications
- Expensive
- Invasive

Distal radius fractures (DRF) account for around one third of all fractures in the elderly with an incidence rate of 190-200 per 100,000 person-years [1,2]. The high incidence is reflected in the lifetime risk of acquiring a DRF of 15% for women and 2% for men [3,4].

Complications of volar locking plating of distal radius fractures in 576 patients with 3.2 years follow-up

Rikke Thorninger[a,*], Mette Lund Madsen[a], Daniel Wæver[a,b], Lars Carl Borris[b], Jan Hendrik Duedal Rölfing[b]

Crossloc

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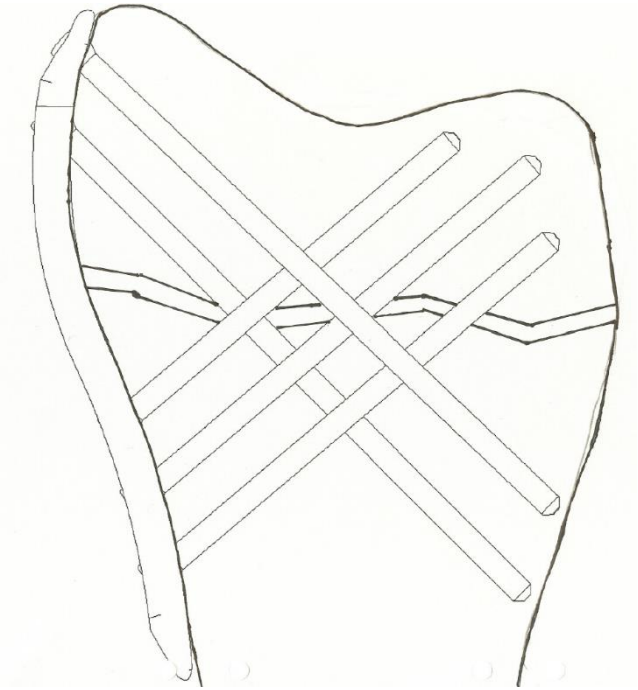
Objective

- Fracture Fixation System for distal radius fractures
- Tailored to simple extra-articular fractures
- Target cost saving compared to volar locking plates
- Simpler and faster surgical approach
- Potential for less complications



How

- Screws passing the fracture site creating an internal raft
- Small radial locking plate prevents screw backing out
- Less invasive approach
- Less hardware

Crossloc - Design

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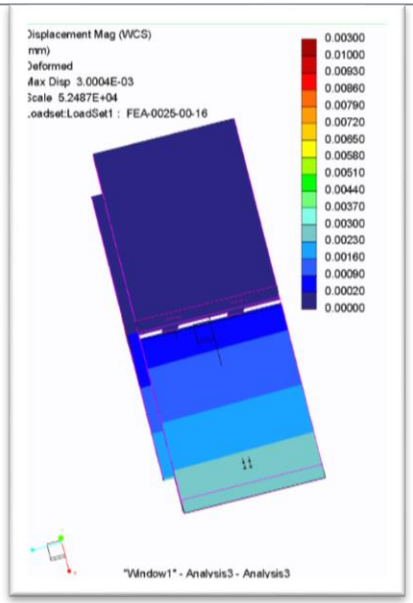
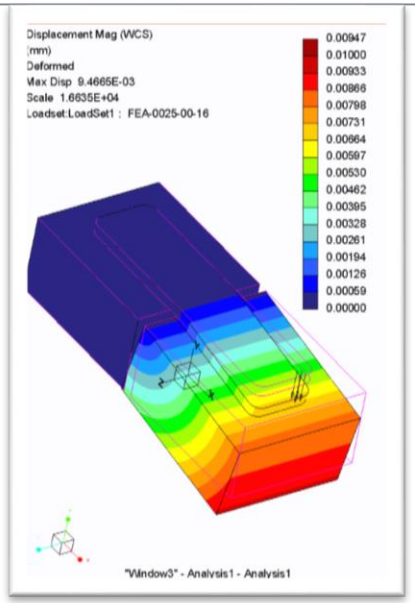
FEA Analysis

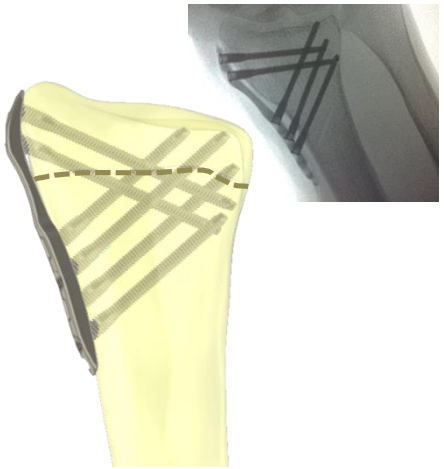
Result:
The deformation is reduced by a factor of 3 compared to volar plates.

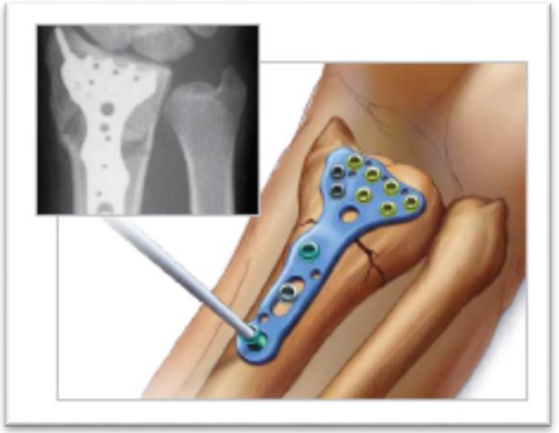
The volume is reduced by a factor of 2 compared to a volar plate.

Potential for additive manufacturing.









Volar Distal Radius Plate, (Acumed)

Crossloc – Surgical Technique

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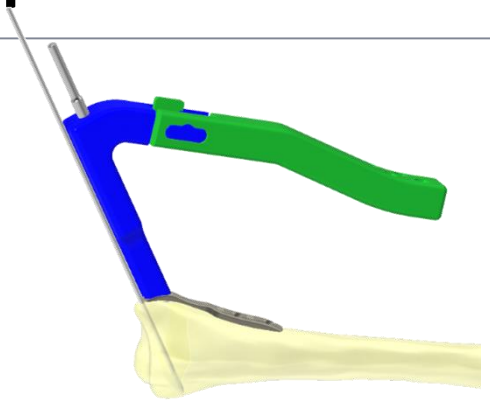
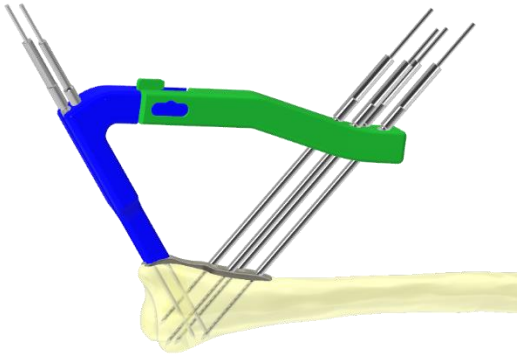
Technique

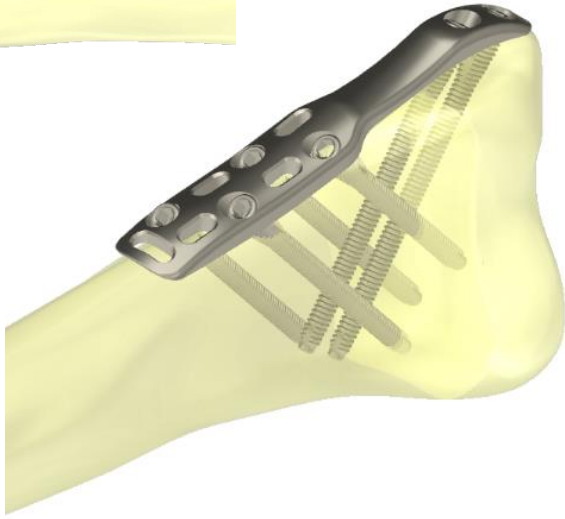
- The plate is assembled to a handle / targeter
- Placed on the bone
- Temporary fixation with K-Wires
- Verify the position
- Successive replacement by locking screws





Challenges

- Screw position
- Plate position and profile



Crossloc – What´s „northopeadic“ about it?

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Bluewater Medical GmbH, Kiel

Consulting Surgeons:

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Prof. Dr. Anders Jönsson, Gothenburg

Prof. Dr. Lars Adolfsson, Linköping

Dr. Rikke Thorninger, Randers

Prof. Dr. Lars Borris, Aarhus

Manufacturing

Kreyenberg GmbH, Norderstedt

Medizin Mechanik Nord, Kiel

Element 22 GmbH, Kiel

Regulatory & Distribution

Swemac Orthopeadics, Linköping

Copenhagen and Oslo