

## Single Use Pulse Lavage

Flexibility for efficient joint arthroplasty and trauma surgery

With its ease of use and effective cleaning, the Single Use Pulse Lavage offers efficiency and convenience throughout the application, resulting in potential reduced risk of revisions for the patient.<sup>1</sup>

Pulsative lavage systems are being used with increasing frequency for total joint replacement. Several studies show that with high pressure pulse lavage, the cement penetration is increased.<sup>2,4</sup> One of the main purposes for using high pressure pulsative lavage systems is to remove blood and debris during joint arthroplasty.<sup>2,7</sup>

The Single Use Pulse Lavage system is used to clean the bone bed and soft tissue during the joint arthroplasty and trauma surgery.

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# E-5

## Single Use Pulse Lavage

**CALEB**  
INNOVATIVE MEDICAL DEVICE

# Improved clinical outcome with high pressure pulse lavage



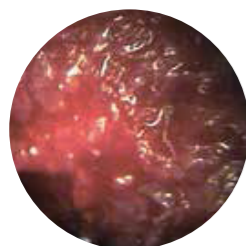
## Clean Bone Bed – Improved bone cement interface

Effective bone bed preparation is one of the corner stones in Modern Cementing Technique. According to the Swedish Hip Arthroplasty Register the use of Modern Cementing Technique can lead to a significant reduction in the risk of revision.<sup>1</sup>

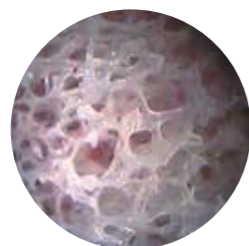
## High pressure pulse lavage

High pressure pulse lavage is a vital step towards achieving proper cement penetration and fixation into the cancellous bone.

High pressure pulse lavage has proven to be advantageous in removing debris and bone marrow from bone bed compared to syringes.<sup>3</sup> It improves cement penetration and may also reduce the risk of embolic complications in joint replacement.<sup>2-5</sup> Clinical studies have shown that the use of high pressure pulse lavage in total joint replacements may reduce the risk of revisions caused by aseptic loosening.<sup>8</sup>



BEFORE



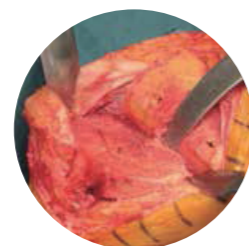
AFTER

## Effective cleaning for optimal micro-interlock

A clean bone cavity, achieved with high pressure pulse lavage, ensures better cement penetration than with syringe lavage.<sup>9</sup> This improves the quality of the bone cement interface, reduces the risk of blood lamination and enhances the mechanical strength of the cement.

## Reduced risk of fat embolism

High pressure pulse lavage used repeatedly during the cleaning sequence may prevent microembolisation of the marrow contents and significantly minimizes circulatory changes. The result of removing medullary content has been proven both experimentally and clinically to reduce risk of fat embolism. Not only the volume, but also the pressure of pulse lavage, influences the risk of fat embolism.<sup>10,11</sup>



Images show before and after use of high pressure pulse lavage.

## E-5 Key Features



## References

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