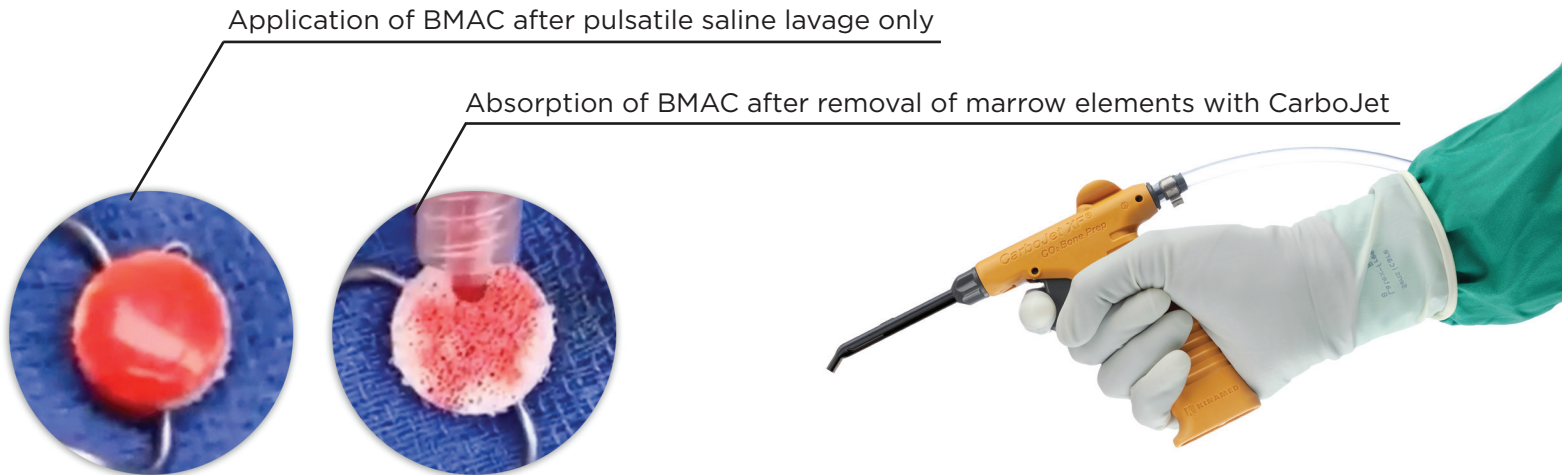


# CarboJet XF<sup>®</sup> CO<sub>2</sub> Bone Preparation System

## Optimize Osteochondral Allograft (OCA) Preparation



Photos courtesy of Adam Yanke, MD, PhD, Midwest Orthopaedics at Rush University, Chicago, IL

### Quickly and Effectively **Remove Immunogenic Marrow Elements** From Allograft Bone

Given that postoperative antibody development may impact graft integrity and longevity, there is great interest in decreasing the amount of antigenic cellular material present in osteochondral allografts.<sup>1</sup>

- CarboJet has been shown to “deep clean” allograft bone by removing marrow elements more effectively than pulsed saline irrigation alone.
- The presence of residual marrow elements in the deepest zones of allograft bone was significantly reduced after CarboJet was used for cleaning.<sup>1</sup>
- Fully disposable CarboJet unit provides an efficient and affordable tool for rapid graft cleaning.

### Provide Opportunity for **Improved Absorption of Biologics** Such As PRP and BMAC

- Enhanced absorption of BMAC into an osteochondral plug is observed after CarboJet cleaning.<sup>2,3</sup>



The CarboJet XF Kit comes sterile packed and is available with an included clip-on splash shield.

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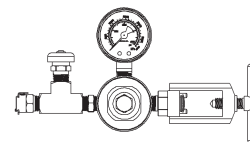
## Optimize Osteochondral Allograft (OCA) Preparation



PART#	DESCRIPTION
27-100-1000	CarboJet XF Handpiece Set with 40° Nozzle
27-100-1010	CarboJet XF Handpiece Set with 40° Nozzle & Splash Shield
27-100-1140	CarboJet XF Splash Shield

Reusable pressure regulator options are available.  
(Regulators do not require sterilization):

PART#	DESCRIPTION
25-200-0100	CO <sub>2</sub> Pressure Regulator with CGA 320 Tank Connector
25-200-0110	CO <sub>2</sub> Pressure Regulator with CGA 940 Connector
25-200-0120	CO <sub>2</sub> Pressure Regulator with 27mm Connector (Italy)
25-200-0130	CO <sub>2</sub> Pressure Regulator with DIN 6 Connector
25-200-0140	CO <sub>2</sub> Pressure Regulator with DIN477 FA9 Connector



### PRESSURE REGULATOR

25-200-0110 CO<sub>2</sub> Pressure Regulator with CGA 940 Connector shown above

The CarboJet System is indicated for the removal of fluid and particulate debris from bone surfaces for site preparation in orthopedic surgery.

1. Maximilian, McCarthy, Gitelis, Poland, Urita, Chubinskaya, Yanke, Cole (2017) Effectiveness of Lavage Techniques in Removing Immunogenic Elements from Osteochondral Allografts. *Cartilage*, Oct;8(4):369-373.
2. Yanke (2021) Guidance on surgical and perioperative management of osteochondral allograft use in the knee. *ICRS Review of Osteochondral Allograft Reconstruction of the Shoulder and Knee*.
3. Kerzner, Gursoy, Dasari, Fortier, Yanke, Chahla (2022) Trochlear osteochondral shell allograft technique to treat trochlear dysplasia in the setting of chondral damage and chronic patellar instability. *Arthroscopy Techniques* 11(2):e241-e249.



#### For more information:

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Scan for video presentation by Adam Yanke, MD, PhD



Caution: Federal law restricts this device to sale by or on the order of a physician. Prior to use of a Kinamed device, please review the instructions for use and surgical technique for a complete listing of indications, contraindications, warnings, precautions, and directions for use. CarboJet<sup>®</sup> U.S. Patent No. 8,100,851; 8,721,595. Japan Patent No. 5,735,524. Additional US & International Patents Pending.