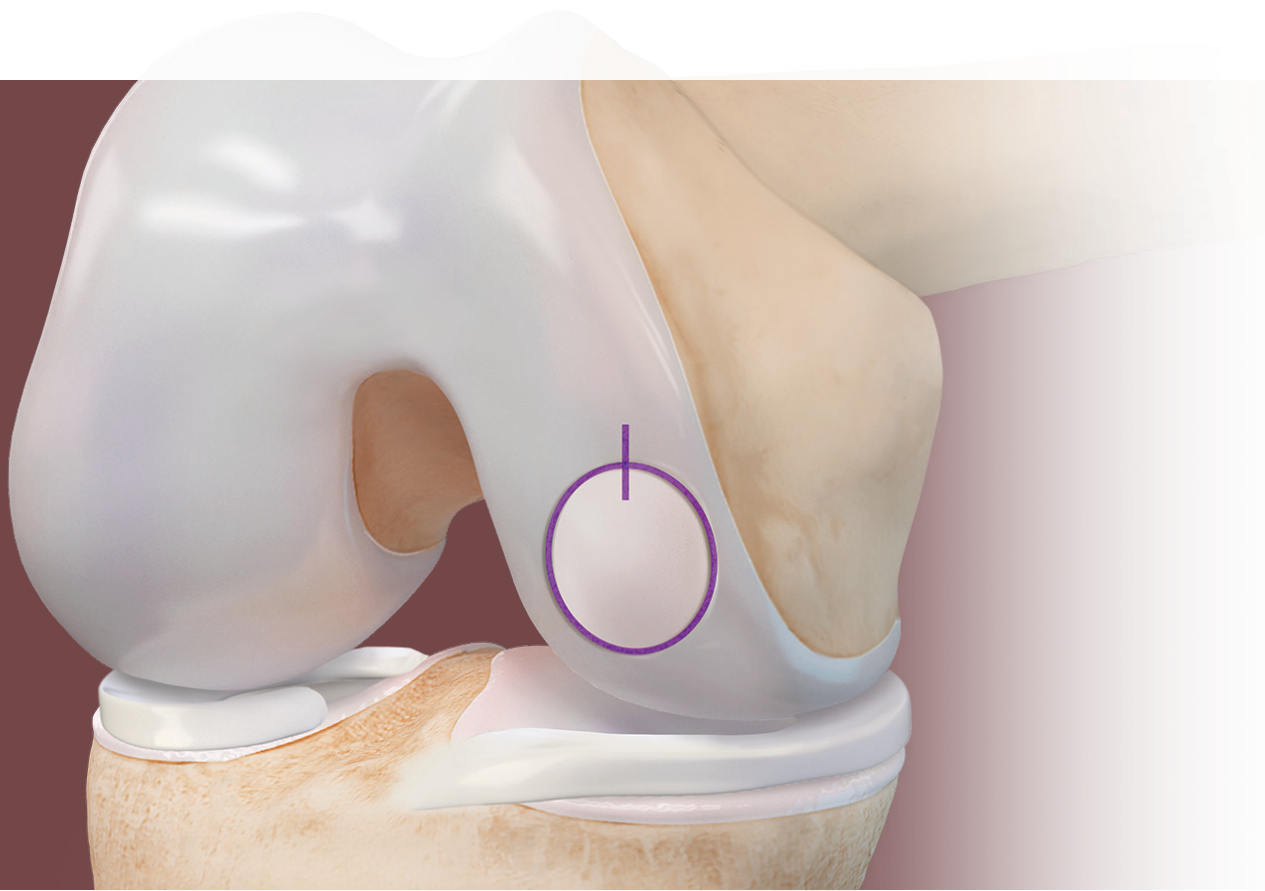


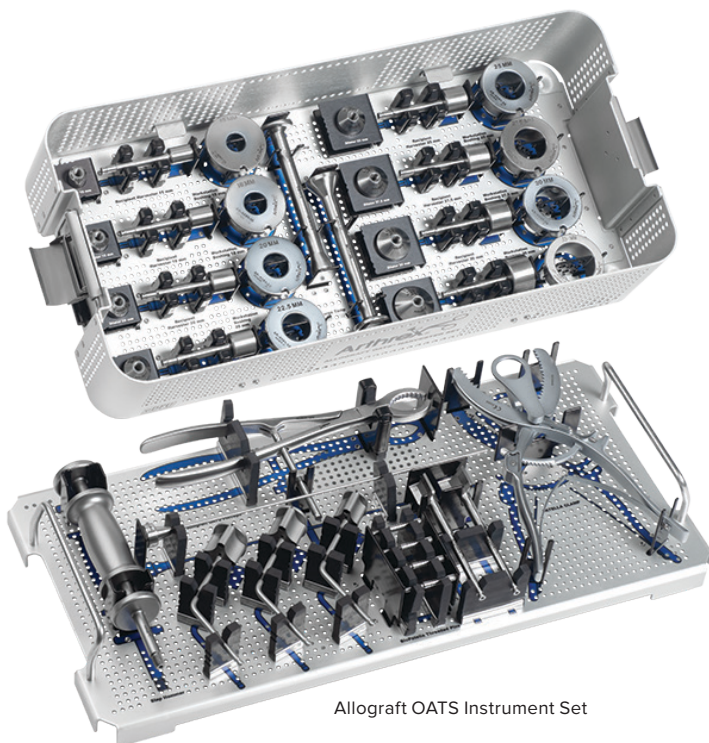
# Allograft OATS<sup>®</sup> System for Articular Cartilage Restoration

Surgical Technique



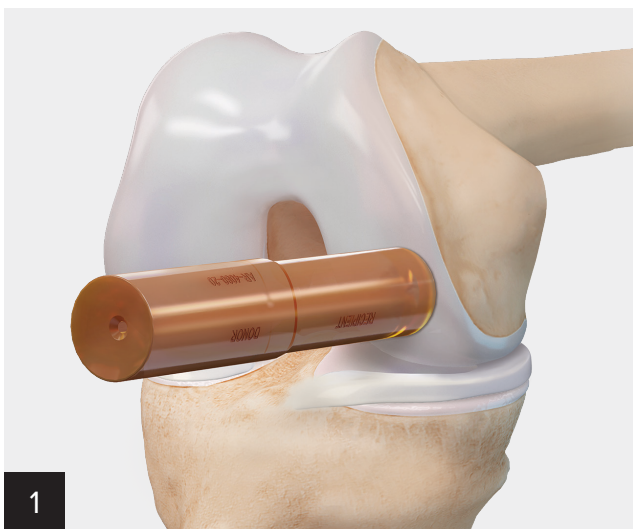
## Introducing the Allograft OATS® System for Cartilage Resurfacing Surgical Technique

There are few treatment options for patients with large, symptomatic lesions of osteoarticular surfaces. The use of fresh osteochondral allografts for osteoarticular resurfacing allows a surgeon to match the contour and cartilage morphology of the recipient site, while avoiding multiple surgical sites and the possible donor-site morbidity associated with recovering an autograft from the knee. Fresh osteochondral allografts are stored in a proprietary storage nutrient media at 4° C to maintain chondrocyte viability. The results of fresh osteochondral allografts are well documented and provide reliable outcomes when restoring articular cartilage.<sup>1-3</sup>

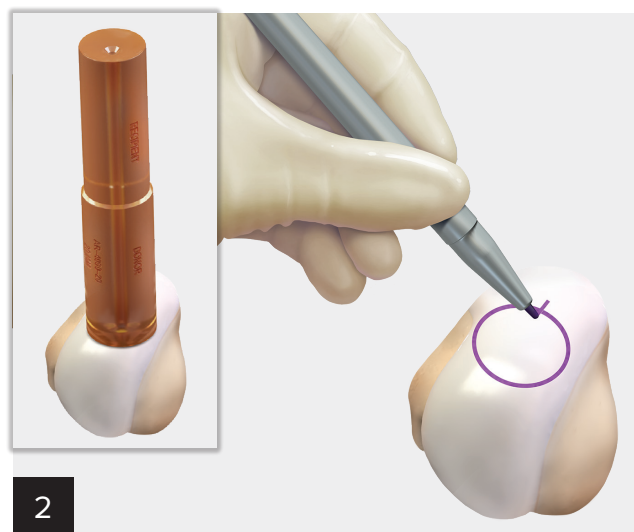


Allograft OATS Instrument Set

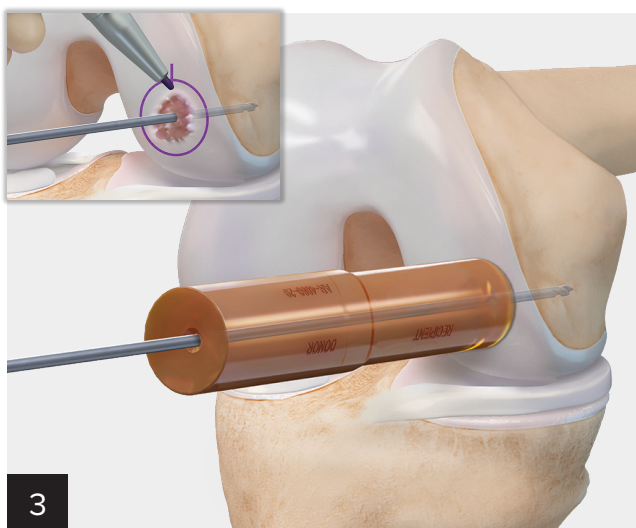
## Surgical Technique



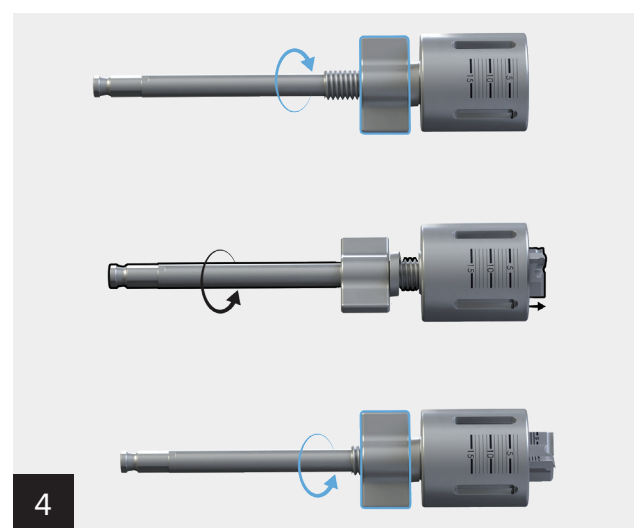
Following standard preoperative examination and diagnostic studies to confirm the size and extent of the lesion, perform a standard parapatellar arthrotomy to expose the defect. Select the appropriate Cannulated Allograft OATS sizers to estimate and approximate coverage of the lesion.



Place the sizer used to establish the recipient defect size over the allograft condyle to ensure the allograft is large enough for the defect site and then mark it circumferentially. Remove the sizer and place a reference mark in a superior 12 o'clock position on the graft.

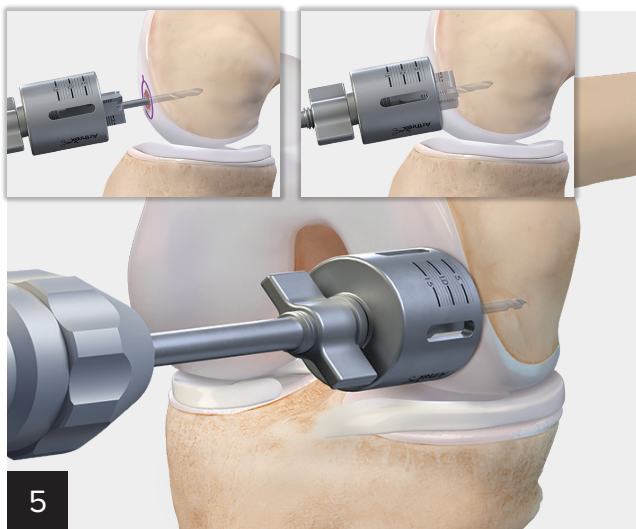


Once the appropriate size match has been confirmed with the sizer, return to the recipient site and place the sizer over the defect, staying perpendicular to the condyle surface. Advance a drill-tip guide pin through the sizer into bone. Create a circumferential mark around the cylinder. Remove the sizer and place a reference mark in a superior 12 o'clock position.

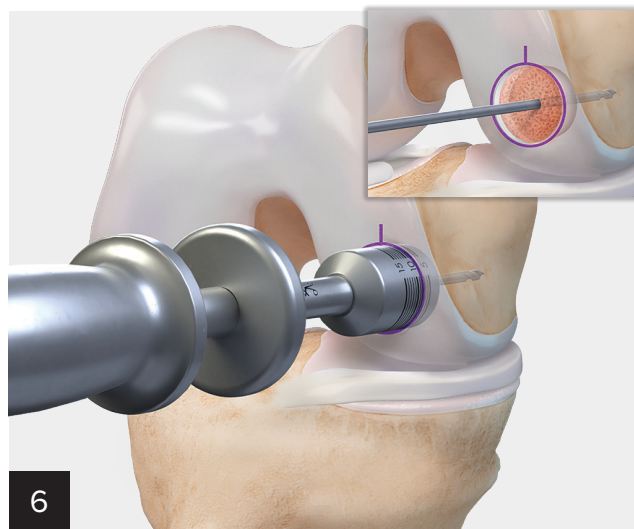


Select the appropriate recipient site reamer and loosen the wingnut. Advance the reamer to the desired depth of the recipient site and secure the wing nut. Assemble the appropriately sized recipient scorer with the quick-connect t-handle and 2.4 mm guide pin, then use it to score the articular cartilage to the subchondral bone.

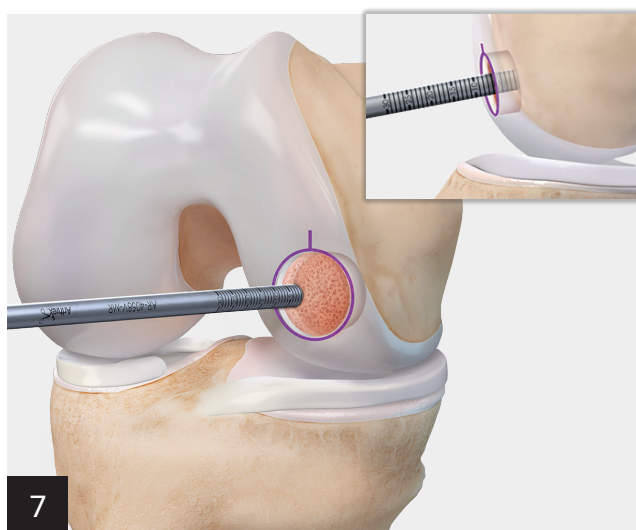
## Surgical Technique (Cont.)



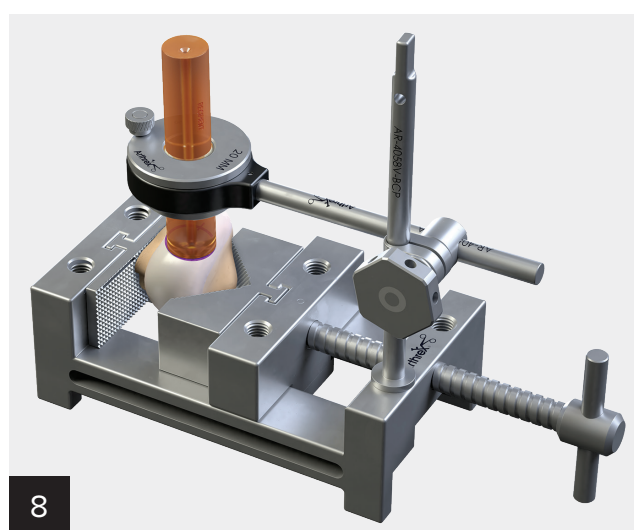
Secure the recipient site reamer with depth-stop to the drill and place it over the drill-tip guide pin. Drill the counterbore into the defect and subchondral bone to the desired depth, typically 5 to 8 mm. Confirm bleeding subchondral surfaces.



Thread the appropriately sized Allograft OATS® dilator onto the slap hammer and insert it into the recipient's socket site to achieve a 0.5 mm socket dilation. Advance the dilator until it has completely seated fully into the socket. Operate the slap hammer to remove the dilator.

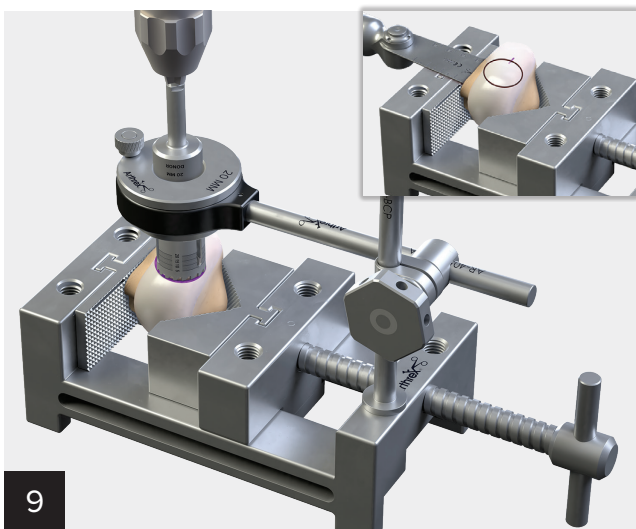


Take depth measurements of the created socket from four quadrants (12, 3, 6, and 9 o'clock) and record them for use when creating the allograft core.

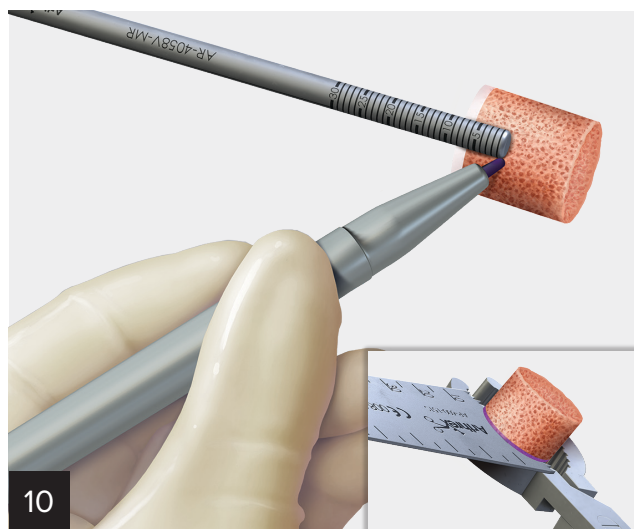


Secure the donor allograft in the Allograft OATS workstation. Place the appropriately sized Allograft OATS workstation bushing into the articulating arm housing and secure it. Move the articulating arm over the graft and set to the exact angle necessary to match the recipient's contour. Use the OATS sizer to confirm you are perpendicular to the graft. Securely fasten the housing using the hexagonal bolt and cheater bar.

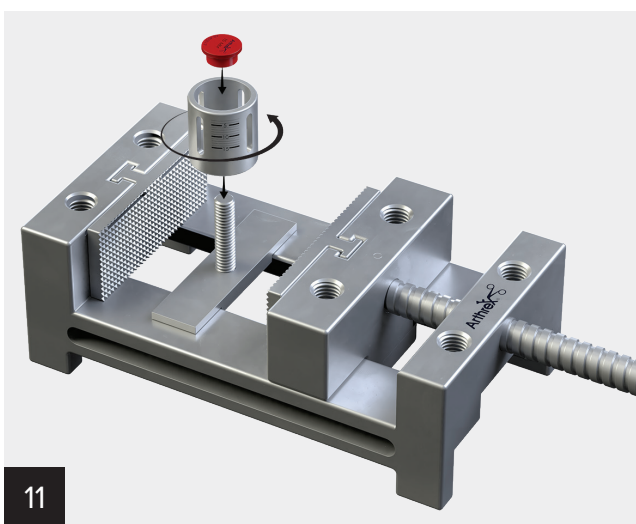
## Surgical Technique (Cont.)



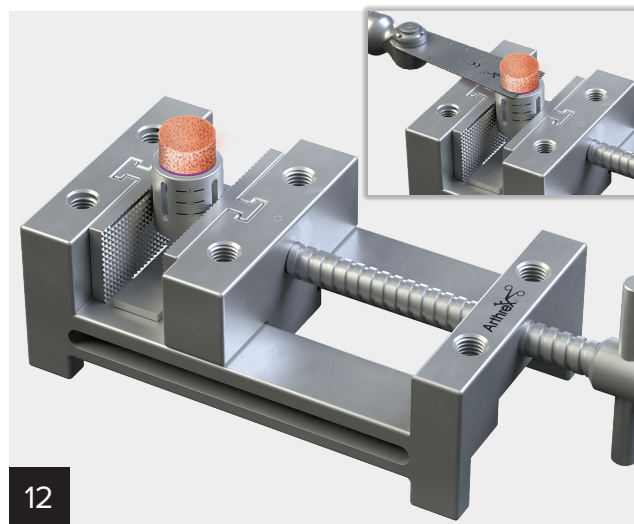
9  
Connect the Allograft OATS® donor harvester, with a collared guide pin, to a drill and pass it into the proximal graft housing to rest on the graft's surface. Drill the harvester to a depth of 15 mm to 20 mm and then remove it. Advance a sagittal saw perpendicularly through the condyle at the approximate depth of the reaming and continue until the core releases. An alternative method would be to ream through the entirety of the allograft and use the collared guide pin to gently extract the graft.



10  
Mark the depths recorded from the recipient socket on the four quadrants of the graft, then draw a circumferential mark on the bone. Secure the graft in the Allograft OATS holding forceps and use a saw to slowly trim it to achieve the appropriate length of bone to ensure a press-fit in the recipient socket. The allograft should be positioned with the articular surface inferior to cut. The bony aspect of the allograft should be pulse lavaged.

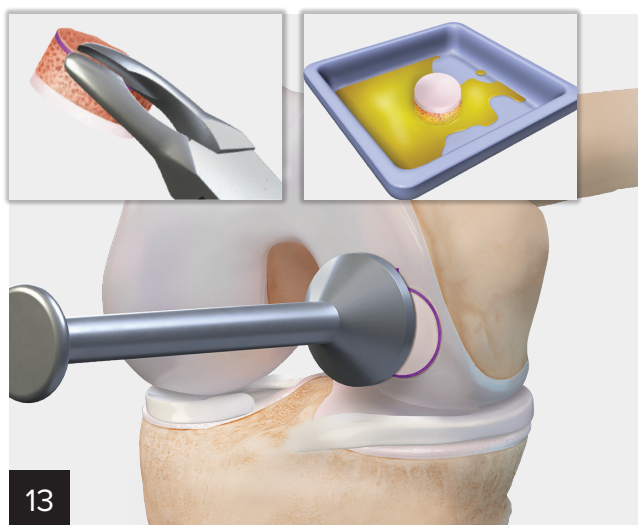


11  
An alternative approach to adjust the length of the allograft core is to assemble the depth seat post with the depth-stop feature from the recipient site reamer. The appropriately sized cartilage protector pad is assembled with the depth seat post and depth-stop feature.



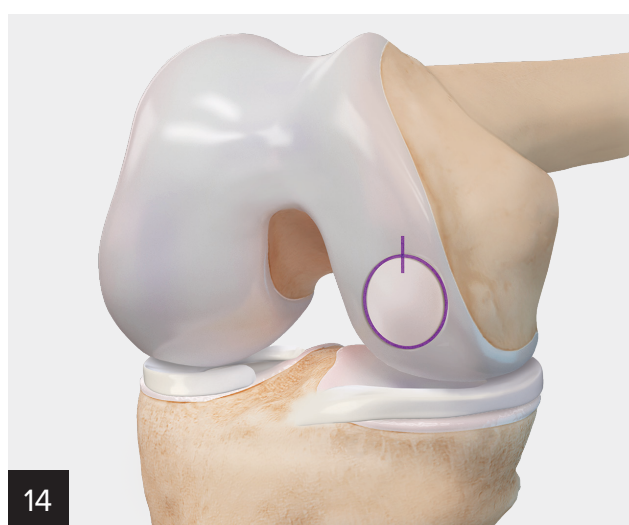
12  
Place the allograft plug cartilage down, toward the cartilage protector pad, and the rotate the depth-stop feature to the desired depth. Once fixed in the workstation, a saw may be used to remove the excess bone and to achieve the desired length of allograft plug.

## Surgical Technique (Cont.)



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Bulletize the graft with a ronguer to assist with insertion. The allograft bone may be soaked in autologous conditioned plasma prior to implantation. A thin layer of demineralized bone matrix (DBM) may be applied to the recipient socket to make slight adjustments as needed. Match the graft reference mark with the recipient reference mark for orientation. Advance the graft with firm pressure into the socket. A tamp may be used as needed to achieve complete insertion.



14

Advance the graft until flush with the surrounding cartilage. The Allograft OATS® graft retriever may be used to facilitate extraction of the graft in the event minor adjustments need to be made.

## References

1. Sadr KN, Pulido PA, McCauley JC, Bugbee WD. Osteochondral allograft transplantation in patients with osteochondritis dissecans of the knee. *Am J Sports Med.* 2016;44(11):2870-2875. doi:10.1177/0363546516657526
2. Krych AJ, Pareen A, King AH, Johnson NR, Stuart MJ, Williams 3rd RJ. Return to sport after the surgical management of articular cartilage lesions in the knee: a meta-analysis. *Knee Surg Sports Traumatol Arthrosc.* 2017;25(10):3186-3196. doi:10.1007/s00167-016-4262-3
3. Bugbee W, Cavallo M, Giannini S. Osteochondral allograft transplantation in the knee. *J Knee Surg.* 2012;25(2):109-116. doi:10.1055/s-0032-1313743

## Ordering Information

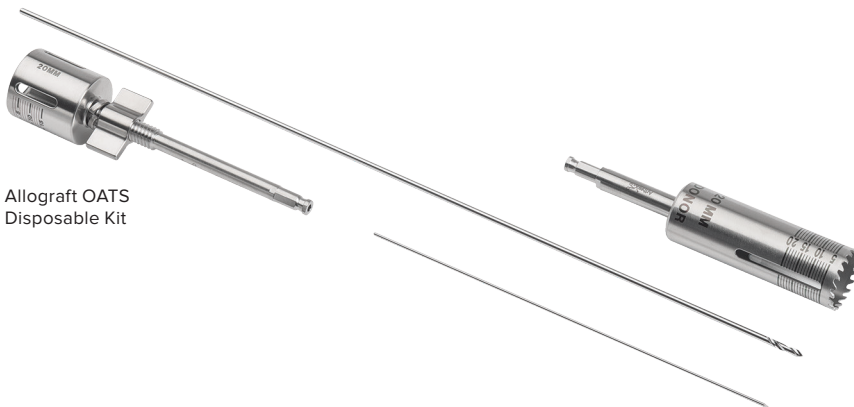
Product Description	Item Number
Allograft OATS® Instrument Set	RAR-4058MS
Allograft OATS Disposable Set	RAR-4058MS-D

### Disposable Kits provided with RAR-4058MS:

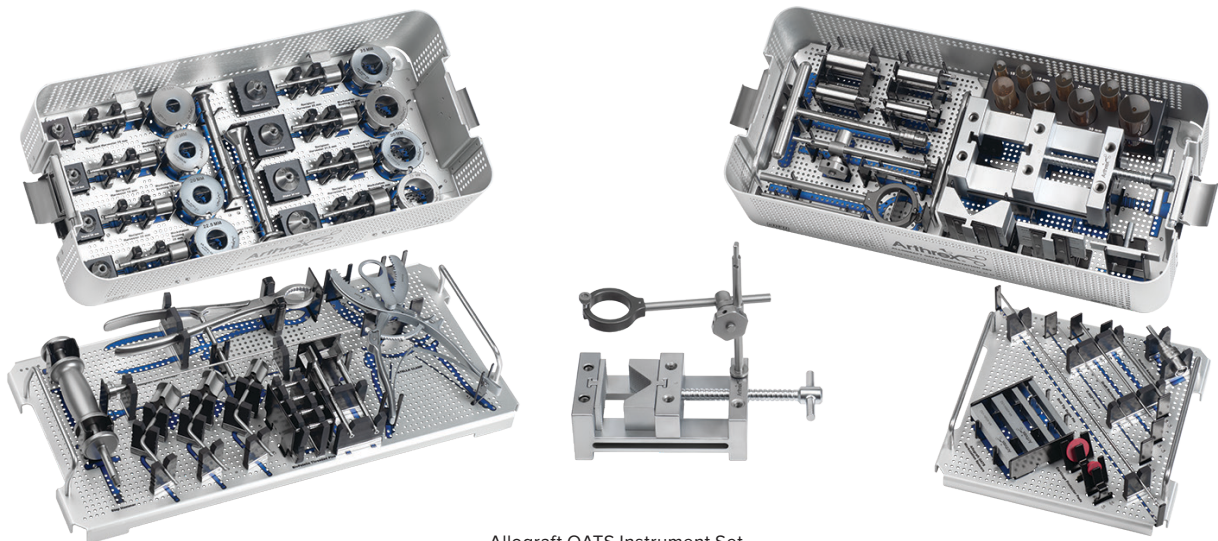
Product Description	Item Number
Allograft OATS Disposable Kit, 15 mm	ABS-4057D-15
Allograft OATS Disposable Kit, 18 mm	ABS-4057D-18
Allograft OATS Disposable Kit, 20 mm	ABS-4057D-20
Allograft OATS Disposable Kit, 22.5 mm	ABS-24057D-225
Allograft OATS Disposable Kit, 25 mm	ABS-4057D-25
Allograft OATS Disposable Kit, 27.5 mm	ABS-4057D-275
Allograft OATS Disposable Kit, 30 mm	ABS-4057D-30
Allograft OATS Disposable Kit, 35 mm	ABS-4057D-35

## Accessories

Product Description	Item Number
Arthrex ACP® Double-Syringe System	ABS-10010S
AlloSync™ DBM Gel, 1 cc	ABS-2013-01
AlloSync DBM Gel, 5 cc	ABS-2013-05



Allograft OATS Disposable Kit



Allograft OATS Instrument Set



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex® products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level and/or outcomes.

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