

## DEDICATED INSTRUMENTS



MedactaQTH

QUAD TENDON HARVESTING

QUALIFIED, TAILORED, HANDY

## DEDICATED SURGICAL TECHNIQUE



1. Vertical Harvesting Incision



2. Horizontal Harvesting Incision



3. Proximal Transection

## REFERENCES

[1] Mulford JS, Hutchinson SE, Hang JR, Outcomes for primary anterior cruciate reconstruction with the quadriceps autograft: a systematic review, *Knee Surg Sports Traumatol Arthrosc.* 2013 Aug; 21(8): pp. 1882-8. [2] Cavaignac E, Coulin B, Tscholl P, Nik Mohd Fatmy N, Duthon V, Menetrey J., Is Quadriceps Tendon Autograft a Better Choice Than Hamstring Autograft for Anterior Cruciate Ligament Reconstruction? A Comparative Study With a Mean Follow-up of 3.6 Years. *Am J Sports Med.* 2017 May; 45(6): pp. 1326-1332. doi: 10.1177/0363546516688665. [3] Fink C, Lawton R, Förschner F, Gföller P, Herbert M., Hoser C., Cruciate Ligament Reconstruction With Rectangular Minimally Invasive Quadriceps Tendon Single-Bundle, Arthroscopic, Anatomic Anterior Cruciate Ligament Reconstruction With Rectangular Bone Tunnels, *Arthroscopy Techniques* October 2018 Vol. 7, Issue 10, pp. e1045-e1056. [4] Lund B, Nielsen T, Faunø P, Christiansen SE, Lind M., Is quadriceps tendon a better graft choice than patellar tendon? a prospective randomized study. *Arthroscopy.* 2014 May; 30(5): pp. 593-8. [5] Herbert M., Tecklenburg K., Zantop T., Raschke M.J., Hoser C., Martin Schulze M., Fink C., Single-Bundle Anterior Cruciate Ligament Reconstruction: A Biomechanical Cadaveric Study of a Rectangular Quadriceps and Bone-Patellar Tendon-Bone Graft Configuration Versus a Round Hamstring Graft. *Arthroscopy. Journal of Arthroscopic and Related Surgery,* December 2013, Volume 29, Issue 12, pp. 1981-1990. [6] Xerogeanes J.W., Godfrey W., Gebrelul A., Premkumar A., Mignemi D., Gottschalk M.B., et al. Clinical Outcomes of All Soft Tissue Quadriceps Tendon Autograft in ACL Reconstruction, *Orthop J Sports Med,* July 2017; 5(7 suppl6): 2325967117S00310. [7] Stäubli H.U., Schatzmann L., Brunner P, Rincón L., Nolte L.P., Mechanical tensile properties of the quadriceps tendon and patellar ligament in young adults, *The American Journal of Sports Medicine* January 1999, 27(1): 27-34. [8] Fink C, Veselko M., Herbert M, Hoser C., MPFL reconstruction using a quadriceps tendon graft Part 2: Operative technique and short term clinical results, *Knee* 2014, <http://dx.doi.org/10.1016/j.knee.2014.05.006>. [9] Fink C, Veselko M., Herbert M, Hoser C., Minimally Invasive Reconstruction of the Medial Patellofemoral Ligament Using Quadriceps Tendon, *Arthroscopy Techniques* 2014 June, Vol 3, Issue 3, pp. e325-e329. [10] Fink C., Steensen R., Gföller P. et al, Quadriceps Tendon Autograft Medial Patellofemoral Ligament Reconstruction, *Curr Rev Musculoskelet Med,* 2018, 11: 209-220. <https://doi.org/10.1007/s12178-018-9476-1>.

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## INTRODUCTION

### ANATOMY

Harvesting of Quadriceps Tendon graft offers unique benefits such as the predictable cross-section, reduced harvest site morbidity<sup>[1]</sup> and improved stiffness profile for knee ligament reconstructions as compared to other autografts<sup>[2]</sup>. As result numerous studies report positive clinical outcomes of ACL<sup>[1,3,4,5,6,7]</sup>, PCL<sup>[7]</sup> and MPFL<sup>[8,9,10]</sup> reconstructions. The versatility of the graft allows for its use in anatomic double-bundle, trans-tibial and all-inside reconstructions of the ACL, as well as providing a more anatomically precise reconstruction of the MPFL<sup>[8,9,10]</sup>.

### HARVESTING

Classical harvesting of the Quadriceps Tendon involves incising of the superficial and subcutaneous layers of the leg at the distal end of the thigh in order to reveal the tendon. Free hand cutting follows, often leading to dimensionally inconsistent and imprecise grafts. Furthermore, the tendon accessing incision of the skin results in cosmetically unattractive post-operative scarring.

The Medacta MectaQTH system is a minimally-invasive, precise and safe means of harvesting the Quadriceps Tendon in a time-efficient manner. The reproducible and atraumatic technique is performed through a small incision at the proximal pole of the Patella improving post-operative cosmesis compared to usual procedures. The dedicated instruments set present precise and consistent incisions with definitive dimensions in a quick, safe and secure manner.

The dedicated instruments and technique ensures:

- Safe tendon transportation thanks to the securing tip
- Prevention of premature tendon transection thanks to the integrated handle locking mechanism
- Minimally-invasive harvesting with expected improved post-operative cosmesis
- Wide product portfolio providing surgeons and their patients more possibilities
- M-ARS ACL dedicated solutions for unmatched ACL reconstructions

## WHY MECTA QTH?



- **EXPECTED QUALITATIVELY SUPERIOR CUTTING PERFORMANCE**
- **TIME-SAVING MINIMALLY INVASIVE TECHNIQUE**
- **HANDLE LOCKING MECHANISM ENSURING SAFE AND SECURE CUTTING**

## VERTICAL CUTTERS

The MectaQTH Vertical Cutters are used to create parallel subcutaneous incisions of the Quadriceps Tendon over a defined length for graft harvesting. Vertical Cutters functional features ensure a consistent and precise Quadriceps Tendon graft:

- **Rounded** cutting edges providing **reduced resistance**
- **Single-unit** shaft-blade design for incision **stability**
- **Anatomic shaft** design for a **facilitated insertion** over the Patella

The instruments are available in a wide range of configurations thereby maximizing the surgical possibilities for ligament reconstructions.



VERTICAL Cutting Blades WxH (mm)
8x5
8x7
9x5
9x7
10x5
10x7
12x5
12x7
14x5
14x7
12.5x5 (Small)*
14.2x5.5 (Medium)*
15.2x6 (Large)*

\* For M-ARS ACL

## HORIZONTAL CUTTERS

The MectaQTH Horizontal Cutters are used to create horizontal subcutaneous incisions of the Quadriceps Tendon over a defined length for graft harvesting. Specific design features improve cutting performance and ensure a consistent tendon thickness across the length of the graft:

- **Triple edged blade** for optimized **tendon incising**
- **Single-unit** shaft-blade design for incision **stability**
- **Anatomic shaft** design for a **facilitated insertion** over the Patella



HORIZONTAL Cutting Blades WxH (mm)
10x4
15x3
15x5
15x6
15x4.5 (Small)*
15x5 (Medium)*
15x5.5 (Large)*

\* For M-ARS ACL

## SUBCUTANEOUS CUTTERS

The MectaQTH Subcutaneous Cutter is used to proximally transect the graft segment at the desired length. Combined functional features ensure guided, safe and clean tendon transection.

- Tendon securing tip for guided and secure instrument advancement
- Handle locking mechanism preventing premature transection
- Angled graft cutting for a facilitated incision at the desired graft length
- No distal detachment required for tendon transection

The instrument is available in two configurations depending on the respective graft sizes:

- Small (colour code: Gold)
- Large (colour code: Black)

