



The future of vision



# FERRARA RING™

## Intrastromal Corneal Implants

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brand name           | FERRARA RING™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Reference            | AFR (optical zone of 5 mm) and AFR6 (optical zone of 6 mm).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Definition           | Intrastromal Corneal Implants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Arc                  | 90°, 120°, 140°, 150°, 160°, 180°, 210°, 300°, 320° *Other arc lengths upon request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Thickness            | 0.15, 0.20, 0.25, 0.30, 0.35 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Indications          | <p>The correct indication of Ferrara Ring implants requires a detailed evaluation of the topographic conditions and pachymetry of the cornea, in addition to a complete visual examination.</p> <ul style="list-style-type: none"> <li>• Progressive keratoconus.</li> <li>• Keratoconus with intolerance to contact lenses.</li> <li>• Corneal deformity induced by contact lenses (Harstein's syndrome).</li> <li>• Post-penetrating keratoplasty astigmatism.</li> <li>• Post-Lasik corneal ectasias.</li> <li>• Post-radial keratotomy astigmatism.</li> <li>• Pellucid marginal degeneration.</li> </ul> |
| Product description  | <p>The FERRARA RING™ consists of a semicircular segment with an arc of multiple lengths and a fixed triangular section: <b>AFR</b> (0.60 mm base) and <b>AFR6</b> (0.80 mm base).</p> <p>Single Use Implant. Each segment has an orifice of 0.20 mm at each end to facilitate its implantation.</p>                                                                                                                                                                                                                                                                                                           |
| Material             | Polymethyl Methacrylate (PMMA) with natural blue light filter .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sterilization method | Ethylene Oxide (ETO).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Supply               | Individual sterile segment, not pyrogenic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Shelf-life           | 4.5 years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### REFERENCE TABLE FOR ORDERS

|              |                                                                                                      |                                                                                              |                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Optical area | AFR= Optical Ferrara Ring 5 mm                                                                       | <b>Reference:</b> AFRXXXXY    XX= Thickness of the ring<br>AFR6XXXXY    YYY= Arc of the ring | <b>Example:</b><br>AFR15160:    AFR620150:<br>Ferrara Ring 5 mm    Ferrara Ring 6 mm<br>Thickness 0.15 mm    Thickness 0.20 mm<br>Arc 160°    Arc 150° |
|              | AFR6= Optical Ferrara Ring 6 mm                                                                      |                                                                                              |                                                                                                                                                        |
| Thickness    | 0.15 mm, 0.20 mm, 0.25 mm, 0.30 mm, 0.35 mm.                                                         |                                                                                              |                                                                                                                                                        |
| Arc          | 90°, 100°, 110°, 120°, 130°, 140°, 150°, 160°, 170°, 180°, 190°, 200°, 210°, 300°, 320°, 330°, 340°. |                                                                                              |                                                                                                                                                        |

\* Product with CE marking

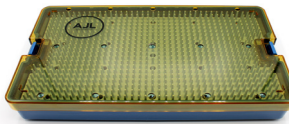
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**For FERRARA RING™ use only (Optical Zone 5.0mm BASE 600µm and 6.0mm BASE 800µm)**

|             |                                                                                   |                                                                                   |                                                                                        |                                                                                     |                                                                                     |                                                                                     |
|-------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |  |  |      |  |  |  |
| Reference   | <b>AJL-TKR111*</b>                                                                | <b>AJL-TKR110*</b>                                                                | <b>AJL-TKR105*</b>                                                                     | <b>AJL-TKR101*</b>                                                                  | <b>AJL-TKR102*</b>                                                                  | <b>AJL-TKR102.01*</b>                                                               |
| Instrument  | Kremer Fixation Forceps.                                                          | McPherson Modified Short.                                                         | Double Sinsky Hook.                                                                    | Mendez transfer.                                                                    | Double optical marker 5 mm.                                                         | Double optical marker 6 mm.                                                         |
| Indications | Eye fixation during incision.                                                     | Ferrara Ring introduction into the tunnel.                                        | Visual axis mark with outer tip. Insertion/extraction of Ferrara Ring from the tunnel. | Axes visualization on the cornea.                                                   | Incision and Ferrara Ring track marking.                                            |                                                                                     |

|             |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|-------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |  |  |  |  |
| Reference   | <b>DK-5-330-1*</b>                                                                | <b>AJL-TKR104*</b>                                                                | <b>AJL-TKR103*</b>                                                                 | <b>AJL-TKR113*</b>                                                                  |
| Instrument  | Diamond Knife.                                                                    | Predelaminator.                                                                   | Suarez Spreader.                                                                   | Bicalho Guide.                                                                      |
| Indications | Incision (square shape).                                                          | Incision opening, corneal pocket start.                                           | Corneal pocket execution, tunnel start.                                            | Spatulas insertion guide.                                                           |

## Manual procedure

|             |                                                                                                            |                                                                                    |                                                                                    |                                                                                    |                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|             |                          |  |  |  |  |
| Reference   | AJL-TKR107*                                                                                                | AJL-TKR109*                                                                        | AJL-TKR106*                                                                        | AJL-TKR108*                                                                        | 6120A*                                                                               |
| Instrument  | Spatula left<br>5 mm. (CCW)                                                                                | Spatula left<br>6 mm. (CCW)                                                        | Spatula right<br>5 mm. (CW)                                                        | Spatula right<br>6 mm. (CW)                                                        | Ferrara Sterilization PlasticTray                                                    |
| Indications | Also known as Corneal Dissectors.<br>Creates a CW and CCW annular subsurface tunnel for Ferrara placement. |                                                                                    |                                                                                    |                                                                                    | Maintenance and sterilization<br>of the instruments.                                 |

## Procedure with Vacuum Pump

|             |                                                                                                                                            |                                                                                                                                                          |                                                                                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                                         |                                                                      |                                                                     |
| Reference   | <b>KV2000*</b>                                                                                                                             | <b>7K5000*</b>                                                                                                                                           | <b>KV10478-2*</b>                                                                                                                                        |
| Instrument  | Vacuum pump.                                                                                                                               | Tubing set.                                                                                                                                              | Suction ring.                                                                                                                                            |
| Indications | A medical device designed to set the eyeball and facilitate the creation of corneal tunnels during intracorneal ring implantation surgery. | Connector between pump and suction ring. It is necessary for the system to work. The flow is controlled by the vacuum pump, which monitors the pressure. | Port for attachment to a vacuum source. Centers and stabilizes the Corneal Separators onto the cornea during the dissection of the intrastromal tunnels. |

|             |                                                                                                         |                                                                                     |                                                                                      |                                                                                       |                                                                                      |                                                                                       |                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|             |                      |  |  |  |  |  |  |
| Reference   | <b>AJLF50L</b>                                                                                          | <b>AJLF60L</b>                                                                      | <b>AJLF50R</b>                                                                       | <b>AJLF60R</b>                                                                        | <b>AT11211*</b>                                                                      | <b>AJLFT5</b>                                                                         | <b>AJLFT6</b>                                                                         |
| Instrument  | Spatula left 5 mm. (CCW)                                                                                | Spatula left 6 mm. (CCW)                                                            | Spatula right 5 mm. (CW)                                                             | Spatula right 6 mm. (CW)                                                              | Suction ring aligner                                                                 | Inspection Gauge, of corneal spatula.                                                 |                                                                                       |
| Indications | Also known as Corneal Dissectors. Creates a CW and CCW annular subsurface tunnel for Ferrara placement. |                                                                                     |                                                                                      |                                                                                       |                                                                                      | Inspects the concentricity and planarity of the Corneal Separator blades.             |                                                                                       |

\* The set is common for both 5mm and 6mm optical zones except these items.

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