



### Takayuki Akahoshi, MD, of Tokyo, Japan is recognized worldwide as a leading innovator in Ophthalmic surgery. In addition to completing more than 10,000 cataract surgeries a year, he has won numerous filmfestival awards for his ground breaking techniques and technological advances. With over 20 patents to his name, he has established his skill as not only a surgeon but also as highly valued teacher. His impact is seen in every corner of the world. He is the winner of the 2017 Kelman Award.

Create a wider surgical field

### **Speculum**



### Akahoshi 3-Prong Speculum:

- 3 prong nasal speculum for easy temporal access with maximum even exposure
- Cilia and Meibomian secretion are blocked by the complete draping with the stable 3-prongs
- · Adjustable square lock keeps stable lid opening during surgery

### Available Models:

AE-1025

AE-1026\*

# 14mm

For narrow lids or deep set eyes (prong width 10mm)

Regular model (prong width 14mm)



### Akahoshi 1-Prong Speculum AE-1027

- Simple single wire speculum for temporal approach
- Adjustable square lock accommodates various lid sizes

### Available Models: AE-1027\*



AE-1028 For narrow lids or deep set eyes (prong width 10mm)

Regular model (prong width 14mm)



### Akahoshi 2-Prong Speculum AE-1029

- · 2 prong nasal speculum for easy temporal access with maximum even exposure
- · Central prong helps the drape to cover the lid edge completely to prevent surgical field contamination by Meibomian secretion

### Available Models:

AE-1029\* Regular model (prong width 14mm) AE-1029L For narrow lids or deep set eyes (prong width 10mm)





### Akahoshi Adjustable Speculum AE-1071

- 3 prong peculum for easy temporal access with maximum even exposure
- For narrow lids or deep set eyes



13mm

# **Micro Coaxial Diamond Knives**



### **Universal Forceps**

Features versatility in design

CCC should be

made with its edge

on the lens optic to

prevent PCO and precise refractive

outcome



# **Akahoshi Capsulorhexis Forceps**

### Akahoshi Capsulorhexis Cross Action Forceps AE-4345

- Unique cross action mechanism reduces loss of viscoelastic material through the incision
- Consecutively deep anterior chamber can be maintained and rhexis edge can be better controlled
- The pointed tip can make the intial puncture of the capsule easily and grasps the capsule edge firmly

6 Laser Lines on the Jaws serve as a guide to Capsulorhexis

Straight Jaws

Sharp tip acts as a cystotome to initiate Capsulorhexis Tongue and groove mechanism prevents jaw overlap 1.8mm+

AE-4347M (with no laser lines)

### Akahoshi Universal Forceps AE-4180

- Features a blunt fine tip whose inner surface is finished rough with a diamond dust coating to secure firm grasping
- Fixates eye by grasping the bulbar conjunctiva atraumatically during the incision
- Can be used to implant CTR and manipulate iris/capsular retractors
- Grasps the corneo-scleral flap during suturing
- Ties 10-0 nylon suture firmly
- Useful for surgeries other than cataract, such as glaucoma, vitreoretinal, lid and extraocular muscle surgeries

### Akahoshi Capsulorhexis Marker AE-2728S\*

The marker has 5.5mm diameter which will indicate the ideal CCC size for a 6.0mm IOL
The marker edge has fine sandblasted finish to

mark clearly with minimum tissue damage



### Akahoshi Micro Incision Capsulorhexis Forceps

Your Style	Flat Handle (with laser lines)	Round Handle (with laser lines)		
Straight Jaws	AE-4344L	AE-4344R		
Vaulted Jaws	AE-4344V	AE-4344VR		

2.0mm+

-	
	AAU GOLEA

1.8mm

Your Style	Flat Handle	Round Handle
Straight Jaws	AE-4347NL* (with no laser lines)	AE-4347R (with no laser lines)
Straight Jaws	AE-4347LS (Jaws only open to 5.5mm that allows surgeons to mark a ideal size of ccc, with no laser lines)	
Straight Jaws	AE-4347 (with laser lines)	

\* Most recommended model

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# Akahoshi Cannulas











### Akahoshi Visco-ICG Cannula, 25G AE-7272

- Designed to apply a small amount of Visco-ICG solution effectively on the capsular surface
- 25 gauge curved cannula with an oval port at its external tip
- Suitable for soft shell stain technique

### Akahoshi Hydrodissection Cannula, 27G AE-7635

• Unique tip design can be easily inserted beneath the capsulorhexis edge

# Akahoshi Hydrodissection Cannula II, 27G, Bevel Tip AE-7636

- 27 gauge cannula facilitates hydrodissection
- Unique tapered tip design can be easily inserted beneath the capsulorhexis edge
- Design allows easy rotation of the nucleus
- Tapered tip easily increases the intraocular pressure for sealing the wound
- Available in single use version, AS-7636\*

# Akahoshi Hydrodissection Cannula II, 27G, Bevel Tip, Sandblasted AE-7636S

- 27 gauge cannula hydrodissection cannula, the same design as AE-7636
- · Can be used to polish the posterior capsule with the sandblast part

### Akahoshi Posterior Capsule Polisher, 27G AE-7536\*

- Gently removes the fine cortical fibers firmly attached on the posterior capsule without stressing the ciliary zonules
- Also available in 2-ports AE-7537 and 3-ports AE-7538
- · Also available in bent version upon request

Creates the ideal ICG stain

Use in conjunction with a small 2.5cc syringe

Make a completely clean capsule

# **Prechoppers - Reduce Phaco Time and Ultrasound Energy**

Complete prechop is the key to successful phaco

Karate Prechop

technique

Dr. Akahoshi first introduced the Phaco Prechop technique in 1992, and with ASICO, launched the World's First Prechopper

- · Phaco Prechop is a technique to divide the nucleus into pieces before phacoemulsification
- Prechopping can be performed under the viscoelastic material without using any ultrasound energy
- Ultrasound time can be reduced to less than 50% of your current procedure

Nuclear Grade	AE-4190	AE-4191	AE-4192	AE-4286	Sustainer
V			$\checkmark$		Yes
IV		(√)	$\checkmark$	(√)	Yes
III	(√)	$\checkmark$	$\checkmark$	$\checkmark$	Suggested
II		$\checkmark$	$\checkmark$	$\checkmark$	No
		$\checkmark$			No

 $(\sqrt{})$  Prechop may be possible depending on the nuclear size

### Suggested use for AE-4190, AE-4191, AE-4284 and AE-4286 for soft nuclei



Dr. Akahoshi first introduced the prechop technique in 1992 and launched World's first prechopper with ASICO

Counter Prechop

technique



Place the sharp edge of the blade at the center of the nucleus and insert it downward. Open the blades slowly when the whole blade is buried in the nucleus.

### AE-4192 can be also used for soft nuclei



The prechopper is inserted through the scleral or clear corneal incision into the core of the nucleus. Note: The entry of the angle of the prechopper is approximately 35° to 40°.

The prechopper is placed deep into the core of the nucleus through the incision.

Use the blunt edge of the

blade to attain the

complete division.

Attain complete division from the proximal to the distal end of the nucleus, as well as from the surface to the bottom.

After rotating the nucleus 90 or 60 degress using the sharp edge of the blade, divide each bisected nuclear fragment in the same way



Once the initial prechop is performed, the prechopper is used with the tips closed to rotate the nucleus and repeat nuclear division.



Rotate the nucleus and repeat the same reocedure. For dense cataract, it is advantageous for the coming phaco to prechop further into smaller pieces.





The Nucleus Sustainer (AE-2530) is carefully introduced under the capsulorhexis edge. The nucleus should be supported at its deep equatorial portion



The Universal Prechopper is inserted into the hardest core of the nucleus. The tip of the sustainer, the core of the nucleus and the prechopper tip should be aligned on the same axis.



The prechopper is engaged to split the nucleus

effectively, including the posterior plate, without

stretching the incision. Repeatedly open the prechopper

until the complete nuclear division has been attained.

Open the prechopper slowly to bisect the nucleus. Attain complete division from the surface to the bottom. The Nucleus Sustainer can be also used as a chopper to cut and chop the nucleus.

# **Akahoshi Prechoppers**













### Akahoshi Combo II Prechopper AE-4190\*

- Designed to prechop soft nuclei in the Micro Coaxial Phaco technique within a 2.0mm or smaller incision
- Grades 1 to 2 nuclei can be easily divided using the Karate Prechop technique (vertical prechop)
- The blades are thinner than the conventional model and are easy to insert into the nucleus
- · Blades open wider in the smaller incision than the conventional models
- Can be used to attain the complete separation of the posterior nucleus plate in the femtosecond laser prechop
- Also offers more mobility with the conventional 3.0mm incision

### Akahoshi Super Combo III Prechopper AE-4191

- This prechopper can be used for the vertical Karate Prechop technique and horizontal Counter Prechop technique as well
- The design of the sharp tip allows for easy insertion into the nucleus and rotation of the nucleus after bisection
- Grade 1 to 2 nuclei can be divided using the Karate Prechop technique
- Grade 3 to 4 nuclei can be divided using the Counter Prechop technique with a Nucleus Sustainer (AE-2530)

### Akahoshi Universal II Prechopper AE-4192\*

- This prechopper, a variation of Universal Prechopper (AE-4282), is suitable for the Counter Prechop technique within 2.0mm or smaller incsion
- It is designed to be used with a Nucleus Sustainer (AE-2530) to support the nucleus on the same axis during the Counter Prechop technique for grade 3 to 5 nuclei
- The blades are thinner than the conventional model and are easy to insert into the nucleus
- The blades open wider through a smaller incision than the conventional models

### Akahoshi Combo Prechopper AE-4284

- Suitable for Karate Prechop (vertical prechop)
- Safely prechop nuclei of grades 1 to 2
- Sharp angular edge used to insert into the nucleus
- Blunt round edge used to ascertain complete division

Thinner blades are easier to insert into the nucleus



Blades open wider in new models, suitable for MICS

# **Prechopper/Splitter**

Manage Karate and Counter Prechop with a single prechopper



For complete nuclear division in Divide and Conquer technique



### Akahoshi Hybrid Combo Prechopper AE-4286

- Can be used for prechopping grade 1 to 4 nuclei like AE-4191
- For grade 1 and 2 nuclei, vertical Karate Prechop can be used easily
- Sharpened angular edge improves insertion into the nucleus and makes nucleai rotation easier
- Grade 3 and 4 nuclei can be divided by the horizontal Counter Prechop technique with a Nucleus Sustainer (AE-2530)
- Rounded side of the blade can be used safely to attain the complete division

### Akahoshi Universal Nucleus Splitter AE-4289

• Helps to attain the complete nucleus division after grooving in the Divide and Conquer technique

> The Nucleus Sustainer has been designed to support the harder

nucleus during prechopping.

This will reduce the stress on the

capsular bag and zonules.

- · Can attain nuclear division even if the grooving was not deep enough
- · Blunt and rounded ring can be used safely to attain complete division
- Can be also used for prechopping of incompletely prechopped softer nucleus safely



Reduces the stress on the zonules in the Counter Prechop technique



- counter prechop technique on myopic eyes with deep anterior chamber and large lens volume
- · Long tip supports the deepest part of nucleus

# Harmonyx<sup>™</sup> TorsionALL Phaco Tip



US Patented device, multiple US, EU patents pending



**Straight** Can be used for any Phaco Techniques

Akahoshi Bent Most suitable for Phaco Prechop techniques and Femtosecond Laser Surgery

Harmonyx<sup>™</sup> tips: US Patent 8,764,782 ; 8,439,933; 8,992,459; 9,132,033; 9,301,873, 9,233,195; 8,801,737 EU Patent 2 429 468



Kelman Bent Most suitable for Divide & Conquer and Phaco-chop technique

### Harmonyx<sup>™</sup> TorsionALL Tip has 4 benefits

- 1. With the Harmonyx<sup>™</sup> tip, fragmentation of the nucleus is possible with low energy consumption by approximately 40%-50%
- 2. Harmonyx<sup>™</sup> tip will cause less thermal damage to the incision when used for the dense cataract in Torsional mode.
- 3. Harmonyx<sup>™</sup> tip will not clog even when it is used for hard nuclei.
- 4. Since Harmonyx<sup>™</sup> tip edge is finished very smooth, there is little concern of rupturing the posterior capsule.



- Easy to make complete occlusion of the tip
- U/S energy is effectively used for emulsification
- No stress on the incision





### **Key Features**

- Increased efficiency
- Less U/S energy
- Less aspiration time
- Less thermal damage of the incision
- · Less fluid consumption
- Can be used on any phaco machines
- Can be used by any phaco techniques
- No sharp edges-safer phaco

Superior Phaco outcome with any techniques or any machines



complete occlusion

Stress on the incision

Loss of U/S energy

# Akahoshi Mini and Ball I/A Tips

### ASICO's unique and patented design Patent: 9,233,195

- 0.3 by 0.2mm oval port allows better occlusion to remove the cortex as compared to the conventional round hole
- These I/A tips are specially designed to allow for increased maneuverability within a Micro Coaxial incision
- The 0.7mm diameter I/A tips create 4 times more irrigation than the conventional 1.0mm tip. It can keep deep anterior chamber
- Designed to be used with any I/A handpiece through both MicroSmooth™ Ultra and Nano sleeves
- Each tip surface is carefully sandblasted to allow the posterior capsule to be polished effectively in the capsular vacuum mode
- The incision can be easily sealed due to the decreased mechanical stress in the incision during cortical aspiration and polishing of the posterior capsule

Another key to successful Micro Coaxial Surgery



Also available without sandblasting Straight AE7-3050NS, Bent AE7-3051NS and Curved AE7-3052NS

### ASICO's unique and patented design Patent: 9,233,195

- 45° port allows complete cortical cleaning by rotation, rather than swivel motion resulting less mechanical stress on the incision
- The smooth surface of the ball head allows safe and complete capsular vacuum and polishing
- The curved tip can reach any part of the capsular bag quite easily
- Universal threading will fit on any threaded I/A handpiece



# I/A Handle



# **Acrylic IOL Implant Forceps**



# **Acrylic IOL Loading Forceps**





### ASICO Cleaning I/A Handle AE7-0029

• For TASS Management - I/A handle's complete cleaning capability helps to avoid possible contamination

• Compatible with all threaded I/A tips, sleeves, and irrigation and aspiration tubes of any phaco machine

### Akahoshi Acrylic IOL Implant Forceps, Flat Handle AE-4269

- Thin, smoothly polished tips will not damage the delicate acrylic lens surface
- · Implantation without stretching a small incision
- · Blades open wide in the eye for easier release of the lens
- Suitable to implant a 3-piece acrylic IOL into the sulcus in case of complication
- $1^{\circ}30'$  to  $7^{\circ}30'$  (oblique) folding for in the bag implantation
- 12° to 6° (longitudinal) folding for sulcus implantation
- Alternative device for 3 piece AcrySoft implantation

### Akahoshi Acrylic IOL Loading Forceps AE-4253N

- Narrow blade enables easy pick up of the AcrySof® single piece IOL from the container
- Tip edges are rounded and mirror polished so as not to damage the IOL
- Smooth tips gently place optic in the cartridge curling towards the cartridge floor allowing the lens to be easily pushed by the plunger
- Allows trailing haptic to be manipulated easier when placing the optic into the cartridge
- · Decreases the incidence of inappropriate settings in the cartridge
- Can be also used to set a three-piece AcrySof® lens into the cartridge



Pick up the lens with a deep grasp



Bend the haptic over the optic



Hold the haptic with a shallow grasp

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Insert the lens into the cartridge



Withdraw the forceps

### Allows for easy and precise loading



# **Royale Injector AE-9036SP**

Unihand injector realized the implantation of 6.0mm IOL through a sub 2.0mm incision



Designed for: Monarch® cartridge C and D

### **Benefits:**

- Single-handed plunging mechanism
- Strong metal plunger ensures steady MICS implantation that can't be attained by the pre-loaded disposuble injectors

European Patent: 1419748 EP, 1287791 EP US Patent: 9095425, 7097649



### Experience the Difference with ASICO Injectors

Features: • All titanium body

- · Gold tip for increased visibility through the cartridge
- Adjustable finger rest
- Removable thumb ring

**Technique:** The Counter Traction Implant Technique developed by Takayuki Akahoshi MD, combines the Royale injector, a sideport instrument and appropriate Monarch<sup>®</sup> Cartridge, allowing 6.0mm optic single-piece AcrySof<sup>®</sup> IOL to be implant through a sub 2.0mm small incision

Keeping the high IOP and providing the counter froce is the key

# Sub-2mm Incision

Fill up the chamber with sufficient Provisc to get a firm eyeball. The upper lip of the cartridge is inserted into the incision.



During the IOL implantation, the edges of the incision should be sceurely tightened with the cartridge port.



During this technique the AE-2530 can provide counter support at the 0.6mm sideport. Smooth plunger movement is also necessary for successful implantation.



The ASICO injectors have a longer plunger which can be easily used to manipulate the IOL in the capsular bag.



Place the IOL so that the capsulorhexis edge is located at the center of the optic. This type of the optical fixation is critical to prevent PCO.

\* An incision size 0.6mm is crucial to prevent the leakage of Provisc and thereby keep the eyeball firm for optimal implantation during this technique.

**Mastering the Counter Traction Implant Technique** 

# **PhysIOL® Lens Instruments**



### Akahoshi PhysIOL® Y Manipulator AE-2906\*

Akahoshi PhysIOL® T Manipulator AE-2906T

- Y shaped hook can manipulate the Double C-loop of PhysIOL® lenses easily
- · L shaped hook can provide the counter force during IOL implantation
- Micro-ball attached at the end of the hook will protect the capsule and IOL during manipulation
- Central big-ball will help to manipulate the IOL position touching on the optic
- · Also suitable for adjusting the axis for the toric IOL from other manufacturers

• Suitable for manipulating the Double C-loop haptics of PhysIOL<sup>®</sup> lenses · Micro ball attached at the end of the hook will protect the capsule and IOL Easy manipulation of Double C- loop without touching the delicate part



# Akahoshi PhysIOL<sup>®</sup> Forceps AE-4182\*

- Suitable for loading PhysIOL® Fine Vision (multifocal) and Ankoris (toric) IOL into the cartridge
- Semicircular blades hold the IOL optic edge without touching the optical center
- Ideal for multifocal IOL with fine diffractive optical design
- The blades are slightly curved to hold the IOL curling downwards
- · Easy to take out the IOL from the lens holder
- · Rod on the end of the forceps will help to manipulate the IOL position in the cartridge
- The blades and rod are mirror polished to avoid any damage on the IOL





\* Most recommended model

# **Toric Marker**

The most accurate Toric Marker



US Patent: 9668920 Mutipule patents pending

### AXsys Toric Reference Marking Device AE-2929\*

- Makes 0°-180° pre-op reference marks to give an accurate reference to the intra-operative marking
- Used with an Intra-operative Axis Marker (AE-2933)
- · Easily can be marked in narrow lids cases
- The detachable AXsys<sup>™</sup> Electronic Toric Head has adjustable sensitivity levels that can be set to be as sensitive as 0.2°, which has tested to be world's most accurate Toric marking device
- Same AXsys™ Electronic Head as the one step model (AE-2930)
- · Sound and LED lights indicate the horizontal position
- When the device is tilted, orange or red light with beeping sound alarms.
- When the device is horizontial green light is on with no sound

### Akahoshi Intra-operative Axis Marker with CCC Guide AE-2933\*

- Outer diameter is as small as 10mm
- Marks the desired axis intra-operatively by adjusting the two arrows to the reference marks
- Conventional axis marker is placed on the limbus while the new marker is placed on the cornea
- Easy to apply for small eyes and narrow lids cases
- CCC guide between the two blades marks 5.5mm circle on the cornea for the precise capsulorhexis

### AXsys One Step Electronic Toric Marking Device AE-2930

- The most accurate and reliable device available in the market accurate up to  $0.2^\circ$
- Ergonomic anti-rotation handle
- The detachable electronic head utilizes visual and audio cues to ensure the correct axis
- · The final axis can be marked on the cornea by one step method
- Also available with 5.5mm CCC guide (AE-2930M), which indicates an ideal size of CCC

Most suitable axis marker for small eyes



Convenient One-Step model





US Patent: 9668920 Mutipule patents pending

# **Tying Forceps**

		ASICO USA	
<b>Tooth Force</b>	eps		



# **Iris Hook Forceps**



# **Iris Retractor**





### Akahoshi Curved Tying Forceps AE-4334

- Features a flat handle
- Suitable for tying 10-0 nylon sutures
- Suitable for implanting CTR
- · Also suitable for manipulating the stopper of iris/capsular retractors

### Akahoshi Curved Tooth Forcep AE-4335

- Features a flat handle
- Toothed tip can grasp the corneal lip firmly
- Suitable for suturing the corneal incision
- Tooth size is 0.12mm

### Akahoshi Iris Hook Forceps AE-4181

- The broad and flat sand-blasted forceps tips hold the iris retractor firmly without rotation
- Can be used to introduce the retractor device easily into the small corneal paracentesis

### MaxIRIS® Akahoshi Flat Iris Retractor AS-9256

- Flat profile avoids chance of torqueing during introduction through a paracentesis
- · Less trauma to iris and capsule due to flat contact
- Hydrophobic disc for stable fixation
- Single use, sterile device, sold in a box of 5

### MaxIRIS® Akahoshi Twin Fiber Iris/Capsule Retractor AS-9257

- Exclusive strand align technology provides larger area of contact to protect iris and capsule
- · Flat hook allows easier grip by forceps without rotation or twisting
- Oval Hydrophobic disc can easily be adjusted
- Twin fiber realizes more stable fixation in the sideport incision
- Single use, sterile device, sold in a box of 5

# For the secure suturing

Not only for pupil dilatation but also for capsular sustaining in subluxated cataract



# **IOL Scissors**

Special scissors make the IOL exchange easier and safer



# **Ring Levitator**

Lifts a dropping nucleus



# **Conjunctiva Irrigator**





# Scrubbing Forceps



### Akahoshi IOL Scissors AE-5438

- · Features specially designed tips to cut an acrylic lens in the anterior chamber
- For added safety, the tips of the scissors are rounded to prevent any potential damage on the capsule and other ocular tissues
- Nucleus Sustainer (AE-2530) can be used to hold the IOL during bisection/trisection

### Akahoshi Ring Levitator AE-7273

- Holds a dropping nucleus
- Can be introduced through a 2.5mm incision
- The viscoelastic material can help in levitation
- Can also be used for nuclear delivery in the extra capsular cataract extraction (ECCE) technique

### Akahoshi Conjunctiva Irrigator AE-7009

- Conjunctival sac irrigator is attached to a 20cc disposable syringe filled with antiseptic solution
- The irrigator is carefully introduced into the conjunctival fornix while the patient is closing the eyes
- As the plunger of the syringe is pushed, the conjunctiva is perfectly washed out by the antiseptic solution which is irrigated through multiple holes on the cannula
- Flushing the conjunctiva is the primary way to reduce endo-ophthalmitis
- Also available with complete closed loop version (AE-7009C)

### Akahoshi Scrubbing Forceps AE-4821

- These forceps are designed to scrub the skin around the eye with a cotton ball dipped in antiseptic solution
- As they have a ring shaped end a wet cotton ball can be firmly grasped and manipulated
- The curved round blade is used to gently open the lid during irrigation of the antiseptic solution into the conjunctival sac

# **D**rapes



### Akahoshi Precut Drape

- Features precut slit made in the skin insensitive adhesive film
- No need of cutting the film after draping
- Special adhesive material ensures no discomfort to patient while undraping
- Folded in a special manner for easy opening making draping process quick and easy
- Upper and lower lids can be covered simultaneously
- Also available in extra opening design for claustrophobia ( Patent Pending )



Perfect draping is a secret key for preventing infection





# **Phaco Wrench**



### Akahoshi Phaco Wrench

- Ensures better torqueing of the tip on the hand-piece
- Works with any phaco tips including  $\operatorname{Harmonyx^{\rm TM}}$  tips

# **Educational Seminar Video by Dr. Akahoshi**

Scan here to see educational video "10,000 Cataract Surgery a Year: How to Attain Premium Surgical Outcomes" by Dr. Akahoshi



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# Akahoshi MICS Set

	AE-1027 - Akahoshi 1-Prong Speculum with Square Lock		
Speculum	AE-1026 - Akahoshi 3-Prong Speculum with Square Lock		
	(for narrow lids or deep set eyes)		
Fixation	AE-4180 - Universal Forceps		
Incision	AE-8190 - Ultra Diamond Knife		
	AE-8131 - Side Port Diamond Knife		
CCC Marker	AE-2728S - Capsulorhexis Marker		
Capsulorhexis	AE-4347NL - Capsulorhexis Forceps with no Laser Lines		
Hydrodissection	AS-7636 - Hydrodissection Cannula (Single Use Version)		
Prechopping	AE-4190 - Combo II Prechopper (for soft nucleus)		
	AE-4192 - Universal II Prechopper (for dense nucleus)		
Sustainer	AE-2530 - Nucleus Sustainer		
oustantor	AE-2530L - Nucleus Sustainer (for myopic eyes)		
Phaco	AE7-3702 - Harmonyx™ 1.2mm Akahoshi Bent		
Ι/Λ	AE7-3062 - Curved Ball I/A Tip		
I/A	AE7-0029 - ASICO Cleaning I/A Handle		
Capsular Cleaning	AE-7536 - Posterior Capsule Polisher, 27G		
IOL Implantation	AE-4253N - Acrylic IOL Loading Forceps		
	AE-9036SP - ASICO Royale Injector		
Sterilization Tray	AST35		

Akahoshi Toric IOL Set
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Dromium Sot	AE-2929 - Axsys <sup>®</sup> Reference Electronic Toric Marking Device
Fremium Set	AE-2933 - Intra-operative Axis Marker with CCC Guide

# **Dr. Akahoshi's Pearls For Micro Coaxial Surgery**

Difficu	ties Encountered	Solution	Instruments	
$\bigwedge$	INCISION Difficulty in making an ideal incision	Use a sharp diamond blade of appropriate size according to the sleeve. Based on the IOL power, we can adjust the incision size by controlling the insertion depth of the keratome. My tunnel length is usually less than 1.0mm. I do not make a long corneal tunnel because it will constrict the sleeve and reduce the irrigation. If the nucleus is prechopped and phacoemulsified by Harmonyx <sup>™</sup> on burst mode, there will be no thermal or mechanical damage of the incision and it will be easily sealed without hydrating the corneal stroma.	AE-8190 - Akahoshi Ultra Diamond Knife AE-8192 - Akahoshi Nano Diamond Knife	
	Difficulty in controlling the insertion depth of the blade	Fix the eyeball by grasping the bulbar conjunctiva	AE-4180 - Akahoshi Universal Forceps	
	Difficulty in implanting AcrySof <sup>®</sup> due to the leakage of OVD	Use a small side port knife. If the side port is too large, there will be a leakage of OVD when the IOL is injected by the Counter Traction technique	AE-8131 - Akahoshi Sub Sideport Dia- mond Knife	
	CAPSULORHEXIS Difficulty in making a capsulorhexis through a small incision	Fill up the anterior chamber with sufficient VISCOAT. As it has a dispersive property, it can maintain deep anterior chamber. Micro incision capsulorhexis forceps with thinner blade will cause less leakage of Viscoat to control the rehexis edge easily. CCC guide will help to make an ideal CCC.	AE-4347NL - Akahoshi Micro Incision Capsulorhexis Forceps AE-2728S - Akahoshi 5.5mm CCC Marker or AE-4347M - Akahoshi Capsulorhexis Forceps with 5.5mm CCC Marker	
	HYDRODISSECTION Unable to rotate the nucleus after bisecting the nucleus. Cortical aspiration damages the incision by the mechanical mainpulation of the I/A tip	Adequate hydrodissection of the nucleus enables the nucleus to move freely and leaves less residual cortex. Use a 2.5ml small syringe attached to the hydrodissection cannula and perform cortical cleaning hydrodissection. Big syring can not attain proper hydrodiesstion	AE-7636 - Akahoshi Hydrodissection Cannula AS-7636 - Single Use Akahoshi Hydro- dissection Cannula	Disclaimer: ASICO, AXsys,
	<b>PRECHOP</b> Thermal burn and mechanical damage of the incision	Prechop the nucleus to reduce the U/S time. ASICO's type II prechoppers open wider in the anterior chamber through a small incision. Use the Nucleus Sustainer, AE-2530, to perform the Counter Prechop technique for a dense nucleus. For myopic eyes, Nucleus Sustainer with a longer tip (AE- 2530L) is useful	AE-4190 - Akahoshi Combo II Prechopper AE-4192 - Akahoshi Universial II Prechopper AE-2530 - Akahoshi Nucleus Sustainer	Harmonyx <sup>™</sup> , MaxIRIS <sup>®</sup> , ASICO Exclusive (logo) are registered trademark of ASICO LLC Monarch <sup>™</sup> is Alcon Laboratory Registered Trademark
	<b>IOL IMPLANT</b> Cannot set the AcrySof <sup>®</sup> properly in the cartridge and /or forceps mark on the IOL	Use special loading forceps. Any single piece AcrySof <sup>®</sup> can be implanted using a D cartridge. Use Provisc which is easier to remove after implanting the lens. Most important point is the IOL should be set curling downward in the cartridge so that the plunger pushes it properly	AE-4253N - Akahoshi Acrylic IOL Loading Froceps AE-9036SP - Royale Injector	AcrySof <sup>®</sup> is Alcon Laboratory Registered Trademark PhysIOL <sup>®</sup> is Registered Trademark
	Sealing Difficult sealing the incision	Prechop the nucleus and use Akahoshi style Harmonyx™ tip on burst mode. Use a Mini or Ball I/A tip to minimize the mechanical damage of the incision during I/A. Inject BSS with AE-7636 from the side port	AE7-3050/3051/3052 - Akahoshi Mini I/A Tip AE7-3060/3061/3062 - Akahoshi Ball I/A Tip	

