

ARTISAN[®] PHAKIC IOL

FACTS YOU NEED TO KNOW ABOUT IMPLANTATION OF THE ARTISAN[®] PHAKIC IOL (-5 TO -20 D) FOR THE CORRECTION OF MYOPIA (Nearsightedness)

PATIENT INFORMATION BROCHURE

This brochure is designed to help you and your ophthalmologist decide whether or not to have surgery for implantation of the ARTISAN[®] PHAKIC IOL. Please read this entire brochure. Discuss its contents thoroughly with your ophthalmologist so that you have all of your questions answered to your satisfaction. Ask any questions before you agree to the surgery.

CAUTION: Federal Law restricts this device to sale by or on the order of a physician

OPHTEC USA, Inc.
6421 Congress Ave., Suite 112
Boca Raton, FL 33487
561-989-8767
<http://www.OPHTEC.com>

This booklet may be reproduced only by a physician considering treating a patient with the ARTISAN[™] Phakic IOL for the treatment of myopia. All other rights reserved.

Table of Contents

1.	Introduction.....	3
2.	How the Eye Functions.....	3
3.	What is the ARTISAN® Phakic IOL?.....	5
4.	Are You a Good Candidate for the ARTISAN® Phakic IOL?.....	6
5.	Benefits of the ARTISAN® Phakic IOL.....	6
6.	Risks of the ARTISAN® IOL.....	6
7.	What to Expect.....	10
	Before the ARTISAN® Phakic IOL Surgery.....	10
	The Day of Your ARTISAN® Phakic IOL Surgery.....	10
	Immediately After Surgery.....	11
	The First Week Following Surgery.....	12
8.	Contraindications.....	12
9.	Precautions.....	13
10.	Questions to Ask Your Ophthalmologist.....	14
11.	Summary of Important Information.....	15
12.	Patient Assistance Information.....	17
13.	Glossary of Terms.....	18
14.	Index.....	21

1. Introduction

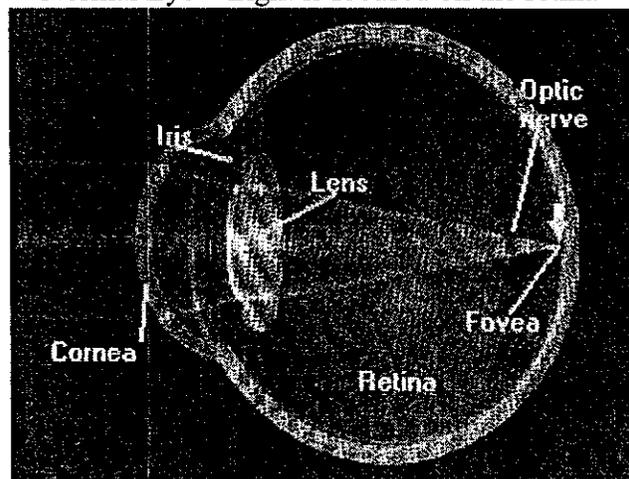
This brochure provides information to help you decide whether to undergo implantation of the ARTISAN® Phakic Intraocular Lens (IOL) for the correction of your nearsightedness (myopia). An IOL is not required to correct nearsightedness. For instance, you may be able to wear glasses or contact lenses instead to correct your vision. Depending on the degree of your nearsightedness and other conditions of your eye, there may also be different refractive surgery options available to correct your vision including Laser Assisted In-Situ Keratomileusis (LASIK).

Please read this brochure carefully and discuss the information with your ophthalmologist and their staff. Your ophthalmologist can determine if you are a suitable candidate for the ARTISAN® Phakic IOL. However, you are the only one who can decide whether the surgery is right for you. The information in this brochure should help you make your decision. You should also discuss your decision with your ophthalmologist, and make sure that all of your questions have been answered to your satisfaction before deciding to proceed with surgery.

2. How the Eye Functions

Your eye focuses light to form images or “pictures” of everything around you, much like a camera. Your eye changes these images into electrical signals and sends them to your brain.

Normal Eye – Light is focused on the retina



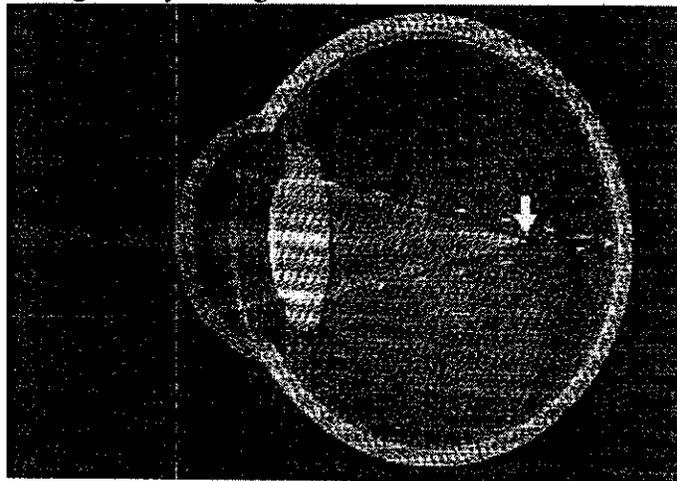
There are several structures in your eye responsible for forming the images that you see. The cornea and crystalline lens focus light by bending it as it enters the eye so the light rays form an image on the retina. The cornea is the clear outermost layer of your eye.

The crystalline lens inside the eye also bends light rays as they pass through the eye. The cornea provides two-thirds of the focusing power of the eye, and the crystalline lens provides the other third. The retina is the part of the eye that transmits information to the brain, allowing you to “see” images. The fovea is the central point on the retina that produces the sharpest vision.

The eye focuses incoming light by bending all the light rays to meet at a single point on the retina. When all of the light rays meet on the retina, it gives you a clear, sharp image of the object at which you are looking. However, if the light focuses behind the retina or in front of the retina, the image you see will be blurred. Depending on where the image focuses, you may be nearsighted or farsighted.

Since the cornea has the greatest bending (focusing) power, it is the cornea’s shape that determines the eye’s focusing power. In normal eyes, the cornea is able to bend light rays to focus on your retina. In nearsighted eyes, the eye is too long and light is focused in front of the retina. In farsighted eyes, the eye is too short and light is focused in back of the retina. There is another condition that also causes blurry vision. If the cornea is shaped irregularly, like an egg, light rays do not come to a single focus point. This condition is called astigmatism.

Nearsighted eye – Light is focused in front of the retina

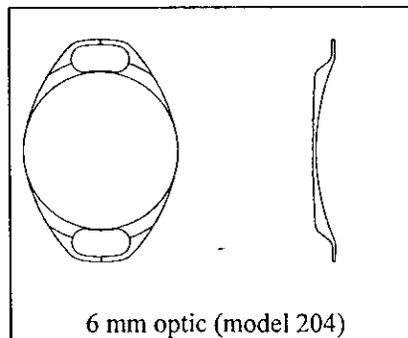
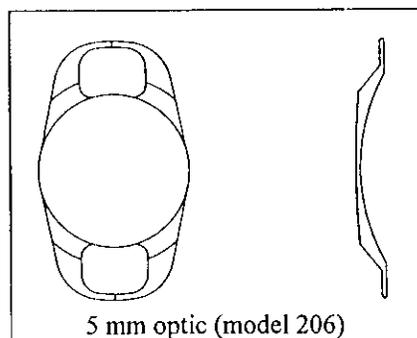


When you have an eye examination, your ophthalmologist is able to determine whether you are nearsighted, farsighted, and/or astigmatic. During the eye exam, your ophthalmologist will measure where your eye focuses light.

If it is determined that you are nearsighted, your ophthalmologist will discuss different treatment options with you. The ARTISAN[®] Phakic IOL is just one option.

3. What is the ARTISAN[®] Phakic IOL?

The ARTISAN[®] Phakic IOL is an intraocular lens that is inserted in front of your natural lens, between the cornea and the iris, during a surgical procedure. This type of lens is called a phakic IOL, because the eye still has its natural lens in place. The IOL is made of the same type of plastic that has been used to make intraocular lenses for cataract surgery. The plastic has a long history of use in these types of products.



The goal of placing the ARTISAN[®] Phakic IOL into your eye is to correct your nearsightedness. The ophthalmologist will select the appropriate lens power (diopter) to correct your nearsightedness. Once the ARTISAN[®] Phakic IOL has been implanted in your eye and your eye has healed, the light coming into your eye can correctly focus on the retina, resulting in improved vision.

The ARTISAN[®] Phakic IOL does not eliminate the need for reading glasses. In some cases, you may need reading glasses after surgery even if you did not need them before.

The ARTISAN[®] Phakic IOL may be implanted in one eye at a time. Your second eye may receive an implant after your ophthalmologist determines that your first eye has healed sufficiently. It is common to perform the second eye implant surgery within 3 months of the first eye. You should discuss this with your ophthalmologist.

The ARTISAN[®] Phakic IOL has been tested and successfully used in Europe since 1990 on thousands of patients. In the United States, clinical studies of the ARTISAN[®] Phakic IOL procedure began in 1997 and ended in 2003. During that time, over 1000 lenses were implanted in over 500 patients. During the U.S. study, over 84% of subjects achieved 20/40 vision or better without the use of glasses or contact lenses.

4. Are You a Good Candidate for the ARTISAN[®] Phakic IOL?

Candidates for the ARTISAN[®] Phakic IOL must meet the following criteria:

- At least 21 years of age;
- Healthy eyes with no eye disease, iris or corneal abnormality (for example, infection);
- Nearsightedness that can be corrected with lenses between -5 to -20 diopters with up to 2.5 diopters of astigmatism;
- Stable refraction, as determined by your ophthalmologist (this is a test to determine that your nearsightedness has not changed more than 0.50 diopters for 6 months prior to surgery);
- Informed of the ARTISAN[®] Phakic IOL's risks and benefits compared with other available treatment options;
- Understand and sign the informed consent form for refractive surgery with the ARTISAN[®] Phakic IOL.

5. Benefits of the ARTISAN[®] Phakic IOL

The ARTISAN[®] Phakic IOL is effective in correcting nearsightedness that can be corrected with lenses between -5 and -20 diopters. If you have nearsightedness in this range, the ARTISAN[®] Phakic IOL may improve your distance vision without glasses or contact lenses.

6. Risks of the ARTISAN[®] Phakic IOL

Implantation of an ARTISAN[®] Phakic IOL is a surgical procedure, and as such, carries potentially serious risks. Please review this brochure and discuss the risks with your ophthalmologist.

The clinical study of the ARTISAN[®] Phakic IOL included the following postoperative vision-threatening events:

- retinal detachment
- cataract development
- lens opacities
- corneal edema

Retinal detachment is a separation of the retina from its connection at the back of the eye. The separation usually results from a tear in the retina. Patients with moderate to high levels of nearsightedness have a higher risk for retinal detachment when compared with the general population. This risk level may be increased with the implantation of the ARTISAN[®] Phakic IOL. This is because inflammation as a result of the surgical

procedure could lead to accelerated cataract development, which has implications for retinal detachment.

A **cataract** is a clouding of the crystalline lens, which impairs normal vision. Patients with high levels of nearsightedness are at an increased risk for cataract development. This risk level may be increased with the implantation of the ARTISAN[®] Phakic IOL. The ARTISAN[®] Phakic IOL is affixed (“clipped”) to the iris which is located in front of the natural crystalline lens. This IOL has a vaulted design so that the back portion of the IOL does not touch the natural lens. However, if the IOL were to come into contact with the lens, cataract development could be induced.

The relationship between the ARTISAN[®] Phakic IOL and future lens opacities and retinal detachment is undetermined.

Corneal edema occurs when the cornea takes on more water than it can absorb, which means the cornea swells and becomes less transparent. Endothelial cells play a role in keeping the cornea healthy. The available 3-year data from the clinical study indicates a continual steady loss of endothelial cells of -1.8% per year and this rate has not been established as safe. If endothelial cell loss continues at the rate of 1.8% per year, 39% of patients are expected to lose 50% of their corneal endothelial cells within 25 years of implantation. The long-term effect on the cornea’s health of a 50% loss in corneal endothelial cells is unknown. However, if too many cells are lost you may need a corneal transplant. Therefore, it is very important that your endothelial cell density is periodically monitored.

Based on the data obtained from the clinical study of the ARTISAN[®] Phakic IOL, it is impossible to predict the effect that this IOL will have on the corneal endothelium. The endothelium is a layer of cells which lines the undersurface of the cornea, and it regulates corneal water content. The endothelium works as a pump, removing excess water as it is absorbed into the stroma, the surface behind the epithelium. If the water content isn’t regulated, the stroma could become saturated, resulting in a hazy and opaque appearance, which would reduce vision.

Patients with high levels of nearsightedness are also at an increased risk for the development of glaucoma. Glaucoma is an increase in the pressure of the eye caused by slowed fluid drainage from the eye. The effect of the ARTISAN[™] Phakic IOL on the future risk of glaucoma is unknown because its affects on the anterior chamber angle were not analyzed in the clinical trial. Approximately 1% of the subjects had elevated eye pressure that required glaucoma medication long term.

Complications associated with the implantation procedure and/or the lens itself are rare. During the clinical trial for this product, the following types of events were reported:

- 1.36% of patients had their IOL exchanged (due to inadequate surgical fixation, the lens optic size was smaller than their pupil size, or a power calculation error).
- 1.51% of patients had their IOL removed (due to inflammatory response, patient anxiety, the lens optic was smaller than their pupil size, postoperative trauma, or surgical trauma).
- 0.60% of patients had to have their IOL reattached (due to inadequate surgical fixation or postoperative trauma).
- 0.45% of patients required repair of their retina
- 0.15% of patients experienced surgical trauma which required retinal repair

The following table shows the percentage of patients from the clinical trial who achieved vision of 20/20 or better, and 20/40 or better. Most patients were able to achieve vision of 20/40 or better.

Lens Group	Plano to:	N	20/20 or Better	20/40 or Better
All Diopter Powers	1 Year	521	39.9%	92.3%
	2 Year	379	36.9%	90.8%
	3 Year	225	35.6%	88.0%
-5 to -7 Diopters	1 Year	11	45.5%	100.0%
	2 Year	7	0.0%	85.7%
	3 Year	8	0.0%	75.0%
>-7 to -10 Diopters	1 Year	90	51.1%	93.3%
	2 Year	60	50.0%	98.3%
	3 Year	32	50.0%	96.9%
>-10 to -15 Diopters	1 Year	347	38.9%	93.1%
	2 Year	252	36.9%	89.7%
	3 Year	148	36.5%	85.8%
>-15 Diopters	1 Year	73	30.1%	86.3%
	2 Year	60	28.3%	88.3%
	3 Year	37	27.0%	91.9%

The following table shows the outcomes for optical visual symptoms for the patients in the clinical trial. This table compares the patients' preoperative levels for glare, halos and starbursts with their postoperative levels. Most patients experienced no change in these symptoms.

Optical Visual Symptom	Pupil Size	Questionnaire Responses*		
		Subjects with no change in symptoms preop to postop	Subjects with change in symptoms preop to postop	
			Preop NO, Postop YES	Preop YES, Postop NO
Glare	All	73.6%	13.5%	12.9%
	≤4.5 mm	70.4%	14.3%	15.3%
	>4.5 to ≤5.5 mm	71.6%	13.4%	15.1%
	>5.5 mm	76.3%	16.8% (p=0.04) [†]	6.9%
Starbursts	All	78.5%	11.8%	9.7%
	≤4.5 mm	77.8%	12.1%	10.1%
	>4.5 to ≤5.5 mm	74.5%	16.3%	9.3%
	>5.5 mm	81.2%	10.9%	7.9%
Halos	All	72.0%	18.2% (p=0.002) [†]	9.8%
	≤4.5 mm	72.8%	17.2%	10.1%
	>4.5 to ≤5.5 mm	69.2%	19.2%	11.6%
	>5.5 mm	72.2%	23.8% (p<0.001) [†]	4.0%

*412 subjects completed the questionnaire; data presented for those subjects that answered nighttime symptom questions; pupil size groups: ≤4.5 mm (n=99), >4.5 to 5.5 mm (n=172), >5.5 mm (n=101).

[†] Statistically significant (McNemar's Test) for those subjects reporting a change in symptom occurrence preoperatively to postoperatively

It is possible that a secondary procedure may have to be performed to fine tune your vision. During the clinical trial of this lens, the following secondary procedures were performed.

- Lens repositioning
- Secondary refractive procedures (LASIK, AK, LRI or PRK).
- Resuturing of the wound leak, aqueous release, or insertion of punctual plugs

It is normal to expect that signs associated with inflammation may be noticed by your ophthalmologist following your surgery. These types of symptoms usually are present after surgery because they are part of the normal healing process; however they will decrease as time goes on, with most being completely resolved by 6 months after your implant.

If your results with the ARTISAN[®] Phakic IOL are not satisfactory, there may be a need for an additional surgical procedure to adjust the lens, exchange the lens or remove the lens.

In some cases, you may need reading glasses after implantation of the ARTISAN[®] Phakic IOL even if you did not need them before.

7. What to Expect

Before the ARTISAN[®] Phakic IOL Surgery

If you are interested in receiving an ARTISAN[®] Phakic IOL, you will need a qualification examination to determine if your eye is healthy and suitable for surgery. This will include a complete eye history, and a thorough examination of both eyes.

Prior to surgery, you will undergo an examination to determine your general health that will assist the surgery staff in preparing for any special needs. Your ophthalmologist may prescribe eye drops or other medication to be taken prior to surgery and you may also be asked to obtain medications for your postoperative care.

Before treatment, be sure to tell your ophthalmologist about any medication you take or allergies you have. You will receive instructions from the ophthalmologist and the surgery center regarding preparation prior to surgery (e.g., food/drink, transportation, arrival time). In all cases, you will need to arrange for someone to drive you home after surgery and to your next appointment. You will not be able to drive until you receive permission from your ophthalmologist.

The Day of Your ARTISAN[®] Phakic IOL Surgery

If you are a contact lens wearer, you will need to stop wearing your contact lenses during your baseline refraction and on the day of surgery. After you arrive and complete the surgery center check-in, you will be taken to the preoperative area and readied for the surgery (this process varies by site).

Depending on the type of anesthesia to be administered, you will be prepared for anesthesia. You may also receive an intravenous drip (I.V.), depending on your needs. Your eye will be prepared to receive the lens implant, and drops will be placed in your eye to make your pupil smaller.

You will be taken to the operating room suite where your eye will be cleaned and prepared to receive the lens. A drape will be placed over you to keep the area around your eye clean. The ophthalmologist will place an instrument in your eyelids to assist in stabilizing your eye. This instrument is used to hold the eyelids apart, to give better access to the eyeball. This can be uncomfortable but most patients tolerate the discomfort for the short surgery.

During the surgical procedure, your ophthalmologist will make an incision in your eye to insert the lens. After the incision is made, a gel-like solution (viscoelastic) is placed into the eye to help during insertion of the lens. The lens is inserted, positioned and then fixed into place in the following manner: The ophthalmologist will insert the lens into the front part (anterior chamber) of your eye between your cornea and the colored central portion of your eye (iris). The ARTISAN[®] Phakic IOL is “clipped” to your iris so it will remain in place after surgery. If any of the gel-like solution remains in your eye, it will be removed by suction (aspiration). Your ophthalmologist will close the incision.

A temporary shield will be placed over the eye to protect it during the immediate postoperative period. You will be transported to a recovery area until you have stabilized and are ready to go home (after approximately one hour). After you have stabilized from the surgery you will be asked to go home and relax for the rest of the day (no lifting, exercise, or other strenuous activity).

Immediately After Surgery

After the surgical procedure, you will be allowed to go home, usually within 60 minutes, but you may not drive yourself. Your ophthalmologist may give you eye drops to use when you return home, with instructions on when and how to use the eye drops. You should only have minor discomfort after the ARTISAN[®] Phakic IOL procedure, but if you do experience pain, be sure to contact your ophthalmologist.

You will return for an evaluation the day after surgery to determine the results of your surgery. At that time, your ophthalmologist will explain to you the care of your eye, precautions and schedule your next follow-up visit. Follow all postoperative instructions given to you by your ophthalmologist and the surgery center. Do not rub your eye(s) as this may cause disruption of the wound or corneal edema.

Some discomfort is normal during the healing process and your ophthalmologist will discuss this with you. Any unexpected pain, discomfort, discharge, trauma or other condition should be reported immediately to your ophthalmologist. If you cannot contact your ophthalmologist you should seek alternative care. Contact your ophthalmologist or the surgery center immediately if your discomfort is greater than expected for the normal healing process.

The First Week Following Surgery

You will return to your ophthalmologist the day after your surgery for an examination. The shield will be removed and your eye will be observed under a special microscope to make sure the lens is positioned correctly and that there are no complications. Although there may be some improvement in your vision at this time, the visual effects of the surgery take 2-4 weeks to stabilize. Most patients are able to return to work and can resume normal non-strenuous activities.

Your ophthalmologist will instruct you to return for additional follow up visits to monitor your progress. Standard postoperative exams are performed postoperatively at 1 day, 1 week, 1 month, 3-6 months and yearly thereafter. It is important to attend all of these visits. If you experience any pain, trauma or unusual discomfort during the postoperative period, immediately contact your ophthalmologist for instructions.

8. Contraindications

You should NOT have the ARTISAN[®] Phakic IOL implanted if:

- You are less than 21 years of age
- You are a woman who is pregnant or nursing
- Your ophthalmologist determines you have an abnormal iris, pupil or cornea
- Your ophthalmologist determines you have an anterior chamber depth of less than 3.2 mm
- Your ophthalmologist determines your endothelial cell density does not meet the minimum recommended density in the following table.

Age	Minimum endothelial cell density
21-25	3550 cells/mm ²
26-30	3175 cells/mm ²
31-35	2825 cells/mm ²
36-40	2500 cells/mm ²
41-45	2225 cells/mm ²
> 45	2000 cells/mm ²

The table indicates the minimum endothelial cell density per age at time of implantation. It sets minimum endothelial cell density criteria as a function of age that will result in at least 1000 cells/mm² at 75 years of age.

9. Precautions

Read this brochure thoroughly prior to making the decision to have the ARTISAN™ Phakic IOL lens implanted in your eye. Be sure your ophthalmologist has informed you of all of the possible risks and benefits with this surgery and you have had all of your questions answered.

If you have any of the following conditions, be sure to discuss them with your ophthalmologist, as you may not be a suitable candidate for this procedure:

- Abnormality of the iris
 - Congenital bilateral cataracts (cataracts in both eyes due to a genetic disorder)
 - Recurrent ocular inflammation
 - History of ocular diseases
 - Previous history of retinal detachment
 - Only one eye with potentially good vision
 - Glaucoma
 - Corneal endothelial dystrophy (a condition in which one or more parts of the cornea lose their normal clarity due to a buildup of cloudy material)
 - Diabetic retinopathy (a common complication of diabetes affecting the blood vessels in the retina; if untreated, it may lead to blindness)
-
- Elevated intraocular pressure has been reported occasionally in patients who receive lens implants. The intraocular pressure of patients should be monitored postoperatively.
 - Individuals participating in activities that would jostle the head or lead to a concussion are at greater risk of sustaining traumatic dislocation of the ARTISAN® Phakic IOL and this may result in the necessity for secondary surgical intervention or potentially loss of vision.
 - Patients could theoretically have problems with glare, halos, and night driving if the patient's dilated pupils are larger than the largest available optic size (6 mm).
 - Visual acuity could be diminished in situations where there is low level lighting.
 - The long-term effect to the corneal endothelial cells has not been established.
 - When pupil size is greater than optic size, there may be visual aberrations.
 - The occurrence of lens opacities in the future is unknown.

10. Questions to Ask Your Ophthalmologist

Ask your ophthalmologist the following questions in order to help you decide whether the ARTISAN™ Phakic IOL is right for you:

- What other options are available for correcting my nearsightedness?
- Will I need to limit my activities after treatment? If yes, for how long?
- What are the benefits of the ARTISAN® Phakic IOL for my amount of nearsightedness?
- What quality of vision can I expect in the first few months after surgery?
- How is the ARTISAN® Phakic IOL likely to affect my need to wear glasses or contact lenses as I grow older?
- Should I have the ARTISAN® Phakic IOL implanted in my other eye?
- How long will I have to wait before having surgery on my other eye?
- What vision problems might I experience if I have the ARTISAN® Phakic IOL only on one eye?
- How much will the surgery and follow-up cost? Will my health insurance cover this surgery?
- Will there be additional costs if I need an additional procedure to fine tune my vision?

11. Summary of Important Information

- The ARTISAN[®] Phakic IOL is intended to be a permanent procedure. While the lens can be removed, vision may not return to what it was prior to surgery.
- The ARTISAN[®] Phakic IOL may not eliminate the need for glasses.
- Your vision should be stable for at least six months prior to surgery. Your ophthalmologist should verify that your nearsightedness has not changed more than 0.50 diopters in the past six months.
- The surgery and implantation of the ARTISAN[®] Phakic IOL is not risk-free. Please review this entire brochure, paying special attention to the risk and benefit sections before agreeing to treatment.
- Alternatives to the ARTISAN[®] Phakic IOL include, but are not limited to, glasses or contact lenses.
- Before considering the ARTISAN[®] Phakic IOL surgery, you should have a complete eye examination and talk with at least one ophthalmologist about the time required for healing and the potential benefits, complications, and risks of the ARTISAN[®] Phakic IOL.
- You should NOT have the ARTISAN[™] Phakic IOL implanted if:
 - You are less than 21 years of age
 - You are a woman who is pregnant or nursing
 - Your ophthalmologist determines you have an abnormal iris, pupil or cornea
 - Your ophthalmologist determines you have an anterior chamber depth of less than 3.2 mm
 - Your ophthalmologist determines your endothelial cell density does not meet the minimum density in the table on page 12 of this brochure.
- If you have any of the following conditions, be sure to discuss them with your ophthalmologist, as you may not be a suitable candidate for this procedure:
 - Abnormality of the iris
 - Congenital bilateral cataracts (cataracts in both eyes due to a genetic disorder)
 - Recurrent ocular inflammation
 - History of ocular diseases
 - Previous history of retinal detachment
 - Only one eye with potentially good vision

- Glaucoma
- Corneal endothelial dystrophy (a condition in which one or more parts of the cornea lose their normal clarity due to a buildup of cloudy material)
- Diabetic retinopathy (a common complication of diabetes affecting the blood vessels in the retina; if untreated, it may lead to blindness)

12. Patient Assistance Information

To be completed by you or your Primary Eye Care Professional as a reference.

PRIMARY EYE CARE PROFESSIONAL:

Name: _____

Address: _____

Telephone No: _____

SURGEON IMPLANTING THE ARTISAN™ PHAKIC IOL:

Name: _____

Address: _____

Telephone No: _____

SURGERY LOCATION:

Name: _____

Address: _____

Telephone No: _____

LENS INFORMATION:

Lens Model Number: _____

Lens Power: _____

IOL MANUFACTURER:

OPHTEC BV
Groningen, The Netherlands
<http://www.OPHTEC.com>

North America

OPHTEC USA, Inc.
6421 Congress Ave., Suite 112
Boca Raton, FL 33487
561-989-8767

13. Glossary of Terms

AK	Arcuate Keratotomy. A method of flattening a part of the cornea with a curved corneal incision, intended to reduce astigmatism. Same as LRI, Limbal Relaxing Incision
Anterior chamber:	The space in the eye that is behind the cornea and in front of the iris
Astigmatism:	A common form of visual impairment in which part of an image is blurred, due to an irregularity in the curvature of the front surface of the eye, the cornea.
Cataract:	A clouding of the lens of the eye. The normally clear aspirin-sized lens of the eye starts to become cloudy which will eventually impair normal vision.
Contraindication:	A condition which makes a particular treatment or procedure inadvisable.
Cornea:	The clear front window of the eye that transmits and focuses light into the eye.
Crystalline lens:	A transparent, colorless body located in the front third of the eyeball, behind the iris, that helps bring rays of light to a focus on the retina.
Diabetic retinopathy:	A common complication of diabetes affecting the blood vessels in the retina. If untreated, it may lead to blindness
Diopter:	Unit of measure for optical strength or refractive power of glasses or contact lenses.
Endothelial cells:	Refers to the cells that make up the thin, innermost layer of the cornea. Endothelial cells are essential in keeping the cornea clear.
Endothelial dystrophy:	A condition in which one or more parts of the cornea lose their normal clarity due to a buildup of cloudy material. The endothelial cells in the cornea gradually deteriorate.

Excimer laser:	A laser that emits very concentrated light in the ultraviolet (UV) region of the spectrum which is used for treating various refractive errors, such as nearsightedness or farsightedness.
Farsightedness (hyperopia):	The ability to see distant objects more clearly than close objects.
Glaucoma:	A common eye condition in which the fluid pressure inside the eyes rises because of slowed fluid drainage from the eye. If untreated, it may damage the optic nerve and other parts of the eye, causing the loss of vision or even blindness.
Halos:	Hazy ring around bright lights seen by some patients with refractive error or optical defects (e.g., cataracts or corneal swelling). This symptom may occur after surgery.
Intraocular pressure (IOP):	Pressure caused by the fluid inside the eye; it helps to maintain the shape of the eye.
Iris:	Circular, colored portion of the eye. Its opening forms the pupil. The iris helps regulate the amount of light that enters the eye.
LASIK:	A laser assisted surgical procedure to correct for the refractive error of the cornea
LRI	Limbal Relaxing Incision. A method of flattening a part of the cornea with a curved corneal incision, intended to reduce astigmatism. Same as AK, Arcuate Keratotomy.
Nearsightedness (myopia):	The ability to see close objects more clearly than distant objects. In this type of refractive error, light is focused in front of the retina. Correction of nearsightedness brings the light to focus on the retina.
Ophthalmologist:	A medical doctor (M.D.) specializing in refractive, medical, and surgical treatment of eye diseases and disorders.
Phakic	Refers to an eye that possess its natural lens.
Pupil:	

diameter depending upon the brightness of the light coming into the eye.

- PRK:** An acronym for “photorefractive keratectomy”. This is a surgical procedure in which a thin portion of the clear front part of the eye (cornea) is reshaped by an excimer laser in a predetermined manner to correct refractive errors of the eye.
- Refractive surgery:** Refers to many different procedures used for correcting the refractive error of an eye.
- Retina:** The thin membranous lining of the rear two-thirds of the eye that converts images from the eye’s optical system into electrical impulses sent along the optic nerve for transmission to the brain.
- Retinal detachment:** A separation of the retina from its connection at the back of the eye. The separation usually results from a tear in the retina.
- RK:** An acronym for radial keratotomy. This is a surgical procedure whereby radial superficial incisions are made on the cornea to correct refractive error.
- Uncorrected visual acuity (UCVA)** The measurement of visual acuity (such as 20/20) without wearing glasses or contact lenses
- Visual aberrations:** A defect of focus, such as blurring in an image.

14. Index

A

Anterior chamber
Astigmatism

B

C

Cataract
Contraindication
Cornea
Crystalline lens

D

Diabetic retinopathy
Diopter

E

Endothelial cells
Endothelial dystrophy
Excimer laser

F

Farsighted

G

Glaucoma

H

Halos

I

Iris

J

K

L

LASIK

M

Myopia

N

Nearsightedness

O

Ophthalmologist

P

Photorefractive
keratectomy (PRK)
Pupil

Q

R

Refractive surgery
Retina
Retinal detachment

S

T

U

V

Visual aberrations

W, X, Y, Z