



Edwards

## Edwards SAPIEN 3 Transcatheter Pulmonary Valve System with Alterra Adaptive Prestent

### SAPIEN 3 Transcatheter Heart Valve with SAPIEN 3 Pulmonic Delivery System

#### Instructions for Use - Pulmonic

Implantation of the transcatheter heart valve and the adaptive prestent should be performed only by physicians who have received Edwards Lifesciences training. The implanting physician should be experienced in balloon valvuloplasty.

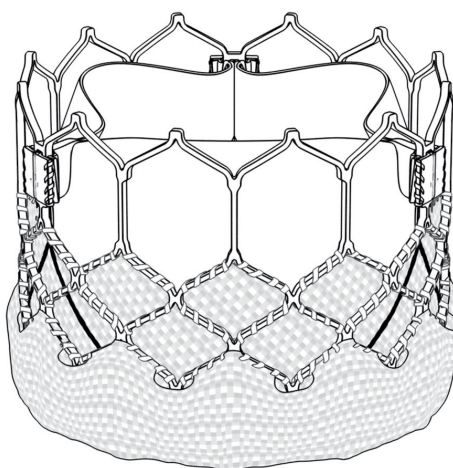
#### 1.0 Device Description

##### Edwards SAPIEN 3 Transcatheter Pulmonary Valve (TPV) System with Alterra Adaptive Prestent

The Edwards SAPIEN 3 transcatheter pulmonary valve system with Alterra adaptive prestent consists of the Edwards 29 mm SAPIEN 3 transcatheter heart valve (THV), the Edwards SAPIEN 3 pulmonic delivery system (PDS), the Edwards Alterra adaptive prestent system and accessories.

##### • Edwards SAPIEN 3 Transcatheter Heart Valve (Figure 1)

The Edwards SAPIEN 3 transcatheter heart valve is comprised of a balloon-expandable, radiopaque, cobalt-chromium frame, trileaflet bovine pericardial tissue valve, and polyethylene terephthalate (PET) fabric skirt. The leaflets are treated according to the Carpentier-Edwards ThermaFix process.



9600TFX

Figure 1: Edwards SAPIEN 3 Transcatheter Heart Valve

Table 1

Valve Size	Valve Height
29 mm	22.5 mm

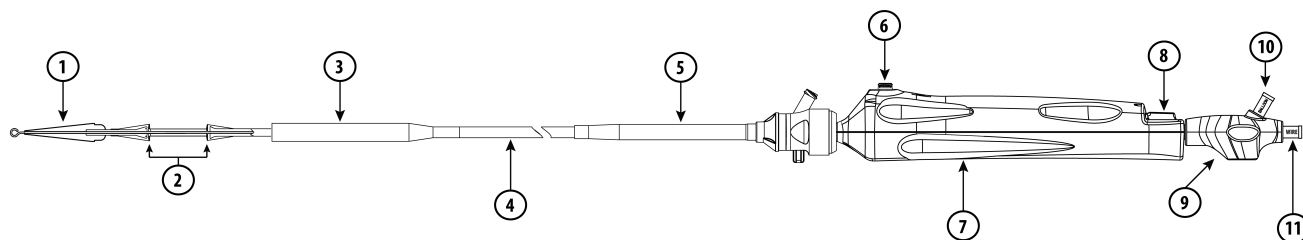
##### • Edwards SAPIEN 3 Pulmonic Delivery System (PDS) (Figures 2, 3, 4)

The Edwards SAPIEN 3 pulmonic delivery system (Figure 2) facilitates the placement of the bioprosthesis. It consists of an inline sheath, balloon catheter for deployment of the Edwards SAPIEN 3 transcatheter heart valve, and an outer shaft and valve capsule to cover the transcatheter heart valve during insertion and tracking to the intended deployment location. The delivery system includes a tapered tip to facilitate crossing of right heart structures. The valve capsule and tapered tip are hydrophilic coated. A visual balloon shaft marker is provided to assist with balloon recapture. A stylet is included within the guidewire lumen of the delivery system. The 28 F hydrophilic coated dilator (packaged with the delivery system) is used to predilate the vessel prior to insertion of the delivery system, if necessary (Figure 3).

The inflation parameters for valve deployment are:

Table 2

Model	Nominal Balloon Diameter	Nominal Inflation Volume	Rated Burst Pressure (RBP)
9630PL29	29 mm	33 ml	7 atm (709 kPa)



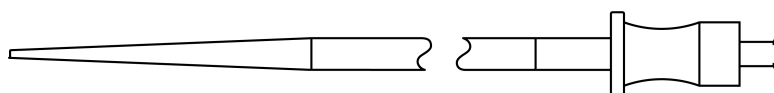
1. Tapered Tip
2. Balloon Shoulders
3. Valve Capsule
4. Outer Shaft
5. Inline Sheath
6. Flush Port
7. Handle
8. Lock
9. Gripper
10. Balloon Inflation Port
11. Guidewire/Flush Port

**Figure 2: Edwards SAPIEN 3 Pulmonic Delivery System**

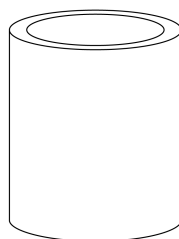
- **Edwards Alterra Adaptive Prestent System**

Refer to the Edwards Alterra adaptive prestent system instructions for use.

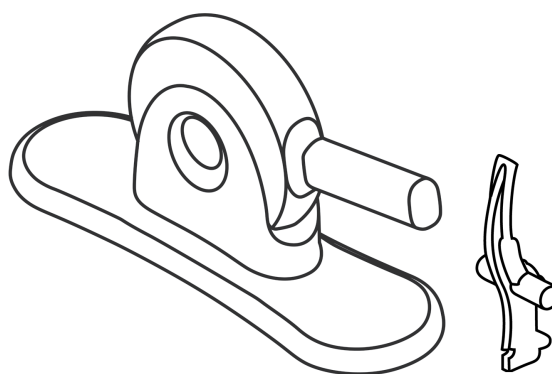
**Additional Devices and Accessories**



**Figure 3: Dilator**



**Figure 4: Qualcrimp Crimping Accessory**



**Figure 5: Edwards Crimper and 2-piece Crimp Stopper**

- **Dilator (Figure 3)**

The dilator allows physicians to predilate the access site prior to valve delivery system insertion.

- **Edwards Sheath**

Refer to the Edwards sheath instructions for use for device description.

- **Qualcrimp Crimping Accessory (Figure 4)**

The Qualcrimp crimping accessory is used during THV crimping. It is packaged with the Edwards SAPIEN 3 pulmonic delivery system.

- **Edwards Crimper and Crimp Stopper (Figure 5)**

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The Edwards crimping reduces the diameter of the valve to mount it onto the delivery system. The crimping is comprised of a housing and a compression mechanism that is closed with a handle located on the housing. A 2-piece crimp stopper is used to crimp the valve to its intended diameter. The 2-piece crimp stopper is packaged with the Edwards SAPIEN 3 pulmonic delivery system.

## 2.0 Intended Use

The bioprosthesis with prestent is intended for use in patients requiring pulmonary heart valve replacement. The delivery systems and accessories are intended to facilitate placement of the bioprosthesis and prestent via the transfemoral access approach.

## 3.0 Indications

The Edwards SAPIEN 3 transcatheter pulmonary valve system with Alterra adaptive prestent is indicated for use in the management of patients with pulmonary regurgitation who have a native or surgically-repaired right ventricular outflow tract and are clinically indicated for pulmonary valve replacement.

## 4.0 Contraindications

The Edwards SAPIEN 3 transcatheter pulmonary valve system with Alterra adaptive prestent is contraindicated in patients who:

- Cannot tolerate an anticoagulation/antiplatelet regimen or who have active bacterial endocarditis or other active infections.

## 5.0 Warnings

- The devices are designed, intended, and distributed STERILE for single use only. Do not resterilize or reuse the devices. There are no data to support the sterility, nonpyrogenicity, and functionality of the devices after reprocessing.
- The physician must verify correct orientation of the valve prior to its implantation; the inflow (outer skirt end) of the valve should be oriented towards the proximal end (handle) of the delivery system to prevent the risk of severe patient harm.
- Accelerated deterioration of the THV may occur in patients with an altered calcium metabolism.
- Assessment for coronary compression risk prior to valve implantation is essential to prevent the risk of severe patient harm.
- The THV must remain hydrated at all times and cannot be exposed to solutions, antibiotics, chemicals, etc. other than its shipping storage solution and sterile physiologic saline solution to prevent leaflet damage that may impact valve functionality. THV leaflets mishandled or damaged during any part of the procedure will require replacement of the THV.
- Patients with hypersensitivities to cobalt, nickel, chromium, molybdenum, titanium, manganese, silicon, bovine tissue, and/or polymeric materials may have an allergic reaction to these materials.
- Do not use the THV if the tamper evident seal is broken, as sterility may be compromised.
- Do not use the THV if the temperature indicator has been activated, as valve function may be compromised.
- Do not use the THV if the expiration date has elapsed, as either sterility or valve function may be compromised.
- Do not use the THV if the storage solution does not completely cover the THV or the THV is damaged.
- Do not mishandle the delivery system or use the delivery system and accessory devices if the packaging sterile barriers and any components have been opened or damaged, cannot be flushed, or the expiration date has elapsed.
- Valve recipients should be maintained on anticoagulant/antiplatelet therapy, except when contraindicated, to minimize the risk of valve thrombosis or thromboembolic events, as determined by their physicians. This device has not been tested for use without anticoagulation.
- The procedure should be conducted under fluoroscopic guidance. Some fluoroscopically guided procedures are associated with a risk of radiation injury to the skin. These injuries may be painful, disfiguring, and long-lasting.

## 6.0 Precautions

- Long-term durability has not been established for the THV. Regular medical follow-up is advised to evaluate valve performance.
- Glutaraldehyde may cause irritation of the skin, eyes, nose and throat. Avoid prolonged or repeated exposure to, or breathing of, the solution. Use only with adequate ventilation. If skin contact occurs, immediately flush the affected area with water; in the event of contact with eyes, seek immediate medical attention. For more information about glutaraldehyde exposure, refer to the Material Safety Data Sheet available from Edwards Lifesciences.
- The safety and effectiveness of the THV implantation has not been established for patients who have:
  - Blood dyscrasias defined as: leukopenia, acute anemia, thrombocytopenia, or history of bleeding diathesis or coagulopathy
  - A known hypersensitivity or contraindication to aspirin, heparin, ticlopidine (Ticlid<sup>TM</sup>), or clopidogrel (Plavix<sup>TM</sup>), or sensitivity to contrast media, which cannot be adequately premedicated
  - Positive urine or serum pregnancy test in female subjects of child-bearing potential
  - A concomitant paravalvular leak where the failing bioprosthesis is not securely fixed in the native annulus or is not structurally intact (e.g., wireframe fracture)
- If a significant increase in resistance occurs when advancing the catheter through the vasculature, stop advancement and investigate the cause of resistance before proceeding. Do not force passage, as this could increase the risk of vascular complications.
- Appropriate antibiotic prophylaxis is recommended post-procedure in patients at risk for prosthetic valve infection and endocarditis.
- Do not overinflate the deployment balloon, as this may prevent proper valve leaflet coaptation and thus impact valve functionality.
- Patient venous anatomy should be evaluated to prevent the risk of access that would preclude the delivery and deployment of the device.
- Patient should be heparinized to maintain the ACT at  $\geq 250$  sec prior to introduction of the delivery system in order to prevent thrombosis.
- Use of excessive contrast media may lead to renal failure. Measure the patient's creatinine level prior to the procedure. Contrast media usage should be monitored.

## 7.0 Potential Adverse Events

Potential risks associated with the anesthesia, interventional procedure and imaging include but are not limited to:

- Death
- Stroke/transient ischemic attack
- Respiratory insufficiency or respiratory failure
- Cardiovascular or vascular injury, such as perforation or damage (dissection) of vessels, myocardium or valvular structures including rupture of the RVOT that may require intervention
- Pericardial effusion/cardiac tamponade

- Cardiac failure
- Embolic event: air, calcific material, thrombus, device fragments
- Infection including incisional site infection, septicemia and endocarditis
- Myocardial infarction
- Renal insufficiency or renal failure
- Conduction system injury
- Arrhythmia
- Deep vein thrombosis
- Arteriovenous (AV) fistula
- Systemic or peripheral nerve injury
- Systemic or peripheral ischemia
- Pulmonary edema
- Pneumothorax
- Pleural effusion
- Dyspnea
- Atelectasis
- Dislodgement of previously implanted devices (i.e., pacing lead)
- Blood loss requiring transfusion
- Anemia
- Radiation injury
- Electrolyte imbalance
- Hypertension or hypotension
- Allergic reaction to anesthesia, contrast media, antithrombotic therapy, device materials
- Hematoma or ecchymosis
- Syncope
- Pain
- Exercise intolerance or weakness
- Inflammation
- Angina
- Fever

Potential risks that may or may not require intervention associated with the valve, delivery system and/or accessories include, but may not be limited to, the following:

- Cardiac arrest
- Cardiogenic shock
- Coronary flow obstruction/transvalvular flow disturbance
- Device thrombosis
- Injury to tricuspid valve
- Device embolization
- Device acute migration or malposition
- Endocarditis
- Chest pain/discomfort
- Hemolysis / hemolytic anemia
- Device dysfunction (regurgitation and/or stenosis)
- Aortic root distortion
- Embolic event: device fragments
- Mechanical failure of delivery system, and/or accessories

## 8.0 Directions for Use

### 8.1 System Compatibility

**Table 3**

Product Name	Model
Edwards SAPIEN 3 transcatheter heart valve (29 mm)	9600TFX29
Edwards SAPIEN 3 pulmonic delivery system <sup>[1]</sup>	9630PL29
Edwards eSheath+ introducer set <sup>[2]</sup>	916ESP
Edwards crimper	9600CR
Edwards Alterra adaptive prestant system <sup>[3]</sup>	29AP4045
Inflation device	96406
Qualcrimp crimping accessory and crimp stopper provided by Edwards Lifesciences	

<sup>[1]</sup> Includes a 28 F Dilator

<sup>[2]</sup> Sheath provided by Edwards Lifesciences or equivalent

<sup>[3]</sup> Includes an Alterra adaptive prestant that is fully loaded in an Alterra delivery system

Additional Equipment:

- Balloon tip catheter
- Sizing balloons
- 20 cc syringe or larger (x2)
- 50 cc syringe or larger
- High-pressure 3-way stopcock
- Standard cardiac catheterization lab equipment and supplies, and access to standard heart valve operating room equipment and supplies
- Fluoroscopy (bi-plane, fixed, mobile or semi-mobile fluoroscopy systems appropriate for use in percutaneous coronary interventions)
- Exchange length 0.035 in (0.89 mm) stiff guidewire
- Sterile rinsing basins, physiological saline, heparinized saline, 15% diluted radiopaque contrast medium
- Sterile table for valve and accessories preparation

## 8.2 Edwards Alterra Adaptive Prestent System Procedure

See Edwards Alterra adaptive prestent system instructions for use for device preparation and implantation prior to transcatheter heart valve preparation and deployment.

Prior to valve implantation, assess Alterra prestent stability by evaluating apices engagement in surrounding tissue, wall apposition, and/or motion of prestent within the anatomy. Three radiopaque markers are provided at the waist of the prestent to help with positioning during fluoroscopy. If adequate stability is not noted, consider staging valve deployment after allowing sufficient time for prestent endothelialization.

**CAUTION: Failure to identify prestent instability may lead to prestent migration/embolization when tracking interventional devices through the prestent.**

## 8.3 Valve Handling and Preparation

Follow sterile technique during device preparation and implantation.

### 8.3.1 Valve Rinsing Procedure

Before opening the valve jar, carefully examine for evidence of damage (e.g., a cracked jar or lid, leakage, or broken or missing seals).

**CAUTION: Valves from containers found to be damaged, leaking, without adequate sterilant, or missing intact seals must not be used for implantation.**

1. Set up two (2) sterile bowls with at least 500 ml of sterile physiological saline to thoroughly rinse the glutaraldehyde sterilant from the valve.
2. Carefully remove the valve/holder assembly from the jar without touching the tissue. Verify the valve serial identification number with the number on the jar lid and record in the patient information documents. Inspect the valve for any signs of damage to the frame or tissue.
3. Rinse the valve as follows: Place the valve in the first bowl of sterile, physiological saline. Be sure the saline solution completely covers the valve and holder. With the valve and holder submerged, slowly agitate (to gently swirl the valve and holder) back and forth for a minimum of 1 minute. Transfer the valve and holder to the second rinsing bowl of physiological saline and gently agitate for at least one more minute. Ensure the rinse solution in the first bowl is not used. The valve should be left in the final rinse solution until needed to prevent the tissue from drying.

**CAUTION: Do not allow the valve to come into contact with the bottom or sides of the rinse bowl during agitation or swirling in the rinse solution. Direct contact between the identification tag and valve is also to be avoided during the rinse procedure. No other objects should be placed in the rinse bowls. The valve should be kept hydrated to prevent the tissue from drying.**

### 8.3.2 Prepare the System

Refer to the Edwards sheath, Edwards crimper instructions for use for device preparation.

1. Visually inspect all the components for damage. Ensure the handle is fully retracted to the gripper.  
**Note: The delivery system is packaged with a balloon cover placed over the balloon and should not be removed until instructed to do so.**
2. Remove the stylet from the distal end of the guidewire lumen and set aside.
3. Flush the guidewire lumen with heparinized saline. Insert the stylet back into the guidewire lumen.  
**CAUTION: Failure to replace the stylet in the guidewire lumen may result in damage to the lumen during the crimping process.**
4. Attach a 3-way stopcock to the balloon inflation port. Ensure stopcock is tightened securely. Fill a 50 cc or larger syringe with 15-20 ml of diluted contrast medium and attach to the 3-way stopcock.
5. Fill the inflation device provided by Edwards Lifesciences with excess volume of diluted contrast medium relative to the indicated inflation volume. Lock and attach to the 3-way stopcock.
6. Close stopcock to the inflation device. De-air the system using the 50 cc or larger syringe. Slowly release the plunger and return to neutral pressure.  
**Note: Do not remove the balloon cover during de-airing.**  
**Note: May take multiple negative pulls to de-air the balloon catheter.**
7. Close stopcock to the delivery system and de-air the inflation device. By rotating the knob of the inflation device, transfer the contrast medium into the syringe to achieve the appropriate volume required to deploy the valve per the inflation parameters.
8. Verify that the inflation volume in the inflation device is correct. Close the stopcock to the 50 cc or larger syringe. Lock the inflation device and remove the syringe. Verify stopcock is securely attached to the balloon inflation port.  
**CAUTION: Maintain the inflation device provided by Edwards Lifesciences in the locked position until valve deployment.**

### 8.3.3 Mount and Crimp the Valve on the Delivery System

1. Set up two (2) additional sterile bowls with at least 100 ml of sterile physiological saline to thoroughly rinse the Qualcrimp crimping accessory.
2. Completely submerge the Qualcrimp crimping accessory in the first bowl and gently compress it to ensure complete saline absorption. Slowly swirl the Qualcrimp crimping accessory for a minimum of 1 minute. Repeat this process in the second bowl.
3. Remove crimper from packaging. Rotate the crimper handle until the aperture is fully open. Attach the 2-piece crimp stopper to the base of the crimper and click into place.
4. Carefully remove the balloon cover from the delivery system. Visually inspect the balloon for damage. Ensure that the stylet is inserted into the guidewire lumen.
5. Remove the valve from the holder and remove the ID tag.
6. With the crimper in the open position, gently place the valve into the crimper aperture. Partially crimp the valve until it fits into the Qualcrimp crimping accessory.
7. Place the Qualcrimp crimping accessory over the valve making sure the edge of the Qualcrimp crimping accessory is parallel to the inflow of the valve.

8. Place the valve and Qualcrimp crimping accessory in crimper aperture. Insert the delivery system coaxially within the valve with the orientation of the valve on the delivery system with the inflow (outer sealing skirt) of the valve towards the handle.  
**Note: Verify correct valve orientation with the inflow (outer sealing skirt) oriented towards the handle.**
9. Crimp the valve between the internal shoulders until it reaches the Qualcrimp stop located on the 2-piece crimp stopper.
10. Gently remove the Qualcrimp crimping accessory from the valve. Remove the Qualcrimp stop from the crimp stopper, leaving the final stop in place.
11. Center the valve within the crimper aperture. Fully crimp the valve until it reaches the final stop and hold for 5 seconds. Repeat this crimp step three (3) more times for a total of 4 crimps.  
**Note: Ensure the valve is coaxial within the crimper aperture and remains between the two internal shoulders of the delivery system.**  
**WARNING: The physician must verify correct orientation of the valve prior to its implantation.**
12. Flush the outer shaft with heparinized saline through the flush port on the handle.
13. Cover the crimped valve with the valve capsule by retracting the balloon catheter into the outer shaft. Ensure that the distal edge of the valve capsule meets the tapered tip of the delivery system.  
**CAUTION: Keep valve hydrated until ready for implantation.**
14. Lock the delivery system.
15. Remove the stylet and flush the guidewire lumen of the delivery system.
16. Flush the inline sheath with heparinized saline. Immediately advance the inline sheath until the sheath tip is against the proximal end of the valve capsule.  
**Note: Do not force the inline sheath over the valve capsule.**
17. Hydrate the tapered tip and valve capsule of delivery system with heparinized saline.
18. Flush and hydrate the dilator.

#### 8.4 Valve Delivery

Valve delivery should be performed under local and/or general anesthesia with hemodynamic monitoring in a catheterization lab/hybrid operating room with fluoroscopic and echocardiographic imaging capabilities.

**CAUTION: Use of excessive contrast media may lead to renal failure. Measure the patient's creatinine level prior to the procedure. Contrast media usage should be monitored.**

1. If necessary, gain access using standard catheterization techniques.
2. Ensure tapered tip and valve capsule of delivery system are hydrated, and the delivery system is locked.
3. If not present, insert the guidewire into the vasculature. Advance the guidewire into the intended landing zone per standard technique.
4. If necessary, remove existing sheath.
5. Predilate the vessel with the provided dilator to prepare the vasculature for insertion and advancement of the delivery system and inline sheath.
6. Introduce the delivery system and inline sheath, until the inline sheath is fully inserted into the vasculature.
7. Continue to advance the delivery system while maintaining inline sheath position and advance to the intended landing zone.  
**CAUTION: Use caution when advancing devices/delivery systems into the implanted Alterra adaptive prestant to avoid engagement with the inflow apices.**
8. Position the valve within the waist of the Alterra adaptive prestant using the fluoroscopically visible radiopaque waist markers.
9. When at the intended landing zone, unlock the delivery system. Unsheathe the valve by retracting the outer shaft while maintaining balloon and inline sheath position. The valve is fully uncovered when the handle meets the gripper. Lock the delivery system. Verify the stopcock is securely attached to the balloon inflation port.  
**CAUTION: Maintain guidewire position in the pulmonary artery during valve unsheathing to prevent loss of guidewire position.**
10. Verify final position and begin valve deployment:
  - a) Unlock the inflation device provided by Edwards Lifesciences.
  - b) Using slow controlled inflation, deploy the valve with the entire volume in the inflation device, hold for 3 seconds and confirm that the barrel of the inflation device is empty to ensure complete inflation of the balloon.
  - c) Deflate the balloon.

#### 8.5 System Removal

1. Once the balloon is fully deflated, ensure the handle is in the locked position, and retract the delivery system into the vena cava.
2. Unlock the delivery system, retract the balloon into the valve capsule.  
**CAUTION: Completely cover the balloon prior to removal to minimize the risk of vascular injury.**
3. Lock the delivery system.
4. Remove all devices when the ACT level is appropriate. Continue to remove the delivery system until the valve capsule meets the inline sheath tip. Remove the inline sheath and the delivery system together.  
**Note: A sheath or other device may need to be inserted per standard of care.**
5. Remove all devices when the ACT level is appropriate.  
Close the access site.

## 9.0 How Supplied

STERILE: The valve is supplied sterilized with glutaraldehyde solution. The delivery system, sheath, and crimper are supplied sterilized with ethylene oxide gas. The Edwards Alterra adaptive prestant system is supplied pouched and sterilized by e-beam sterilization.

The THV is supplied nonpyrogenic packaged in buffered glutaraldehyde, in a plastic jar to which a tamper evident seal has been applied. Each jar is shipped in a shelf box containing a temperature indicator to detect exposure of the THV to extreme temperature. The shelf box is enclosed in Styrofoam prior to shipping.

#### 9.1 Storage

The transcatheter heart valve must be stored at 10 °C to 25 °C (50 °F to 77 °F). Each jar is shipped in an enclosure containing a temperature indicator to detect exposure of the THV to extreme temperature. The delivery system and accessories should be stored in a cool, dry place. The prestant and delivery system must be stored in a cool, dry place.

## 10.0 MR Safety



### MR Conditional

Non-clinical testing has demonstrated that the Edwards Alterra adaptive prestant, alone or with a deployed SAPIEN 3 transcatheter heart valve, is MR Conditional. A patient can be scanned safely immediately after placement of this implant in an MR system meeting the following conditions:

- Static magnetic fields of 1.5 Tesla and 3.0 Tesla
- Spatial magnetic gradient field of 3000 Gauss/cm (30 T/m) or less
- Maximum MR system-reported, whole body averaged specific absorption rate (SAR) of 2.0 W/kg (normal operating mode) scanning per sequence
- Gradient system is in normal operating mode

Under the scan conditions defined above, the Edwards Alterra adaptive prestant, alone or with a deployed SAPIEN 3 transcatheter heart valve, is expected to produce a maximum temperature rise of 4.0 °C or less after 15 minutes of continuous scanning.

In non-clinical testing, the image artifact caused by the device extends as far as 15 mm for gradient echo images when scanned using a 3.0 T MRI system. The artifact obscures the device lumen in spin and gradient echo images.

The delivery system has not been evaluated for MR compatibility and is considered MR unsafe.

## 11.0 Patient Information

Patient education brochures are provided to each site and should be given to the patient to inform them of the risks and benefits of the procedure and alternatives in adequate time before the procedure to be read and discussed with their physician. A copy of this brochure may also be obtained from Edwards Lifesciences by calling 1.800.822.9837. A patient implant card is provided with each prestant and THV. After implantation, please complete all requested information and provide the implant card to the patient. The serial number is found on the package. This implant card allows patients to inform healthcare providers what type of implant they have when they seek care.

## 12.0 Recovered Valve, Prestent and Device Disposal

The explanted valve should be placed into a suitable histological fixative such as 10% formalin or 2% glutaraldehyde and returned to the company. The explanted prestant should be placed into a suitable container and returned to the company. Refrigeration is not necessary under these circumstances. Contact Edwards Lifesciences to request an Explant Kit.

Used devices may be handled and disposed of in the same manner as hospital waste and biohazardous materials. There are no special risks related to the disposal of these devices.

## 13.0 Qualitative and Quantitative Information related to the Alterra Adaptive Prestent System and SAPIEN 3 Transcatheter Heart Valve

The Alterra adaptive prestant system and SAPIEN 3 transcatheter heart valve contain the following substance(s) defined as CMR 1B in a concentration above 0.1% weight by weight:

Cobalt; CAS No. 7440-48-4; EC No. 231-158-0

Current scientific evidence supports that medical devices manufactured from cobalt alloys or stainless steel alloys containing cobalt do not cause an increased risk of cancer or adverse reproductive effects.

For the Alterra adaptive prestant, the following table shows the qualitative and quantitative information on the materials and substances:

Table 4

Substance	CAS	Model Mass Range (mg)
Nickel	7440-02-0	430 - 450
Titanium	7440-32-6	337 - 359
Polyethylene terephthalate	25038-59-9	146
Polyethylene	9002-88-4	27.5
Tantalum	7440-25-7	9.68 - 9.70
Titanium dioxide	13463-67-7	0.319 - 0.613
Iron	7439-89-6	0 - 0.396
Cobalt	7440-48-4	0 - 0.395
Oxygen	7782-44-7	0 - 0.317
Carbon	7440-44-0	0 - 0.317
Niobium	3/1/7440	0 - 0.207
Antimony trioxide	1309-64-4	0.176
Chromium	7440-47-3	0 - 0.0789
Copper	7440-50-8	0 - 0.0789
Nitrogen	7727-37-9	0 - 0.0404
Hydrogen	1333-74-0	0 - 0.0396
Tungsten	7440-33-7	0 - 0.00485
Molybdenum	7439-98-7	0 - 0.00194
Erucamide	112-84-5	0.00149 - 0.00152
Silicon	7440-21-3	0 - 0.000485

Substance	CAS	Model Mass Range (mg)
4-Dodecylbenzenesulfonic acid	121-65-3	0.000160

For the SAPIEN 3 transcatheter heart valve, the following table shows the qualitative and quantitative information on the materials and substances:

**Table 5**

Substance	CAS	Model Mass Range (mg)
Cobalt	7440-48-4	131 - 427
Nickel	7440-02-0	148 - 405
Chromium	7440-47-3	85.2 - 230
Polyethylene terephthalate	25038-59-9	102 - 170
Collagens, bovine, polymers with glutaraldehyde	2370819-60-4	58.3 - 141
Molybdenum	7439-98-7	40.3 - 115
Polytetrafluoroethylene	9002-84-0	17.5 - 25.5
Polyethylene	9002-88-4	14.2 - 19.7
Iron	7439-89-6	0 - 10.9
Titanium	7440-32-6	0 - 10.9
Manganese	7439-96-5	0 - 1.64
Silicon	7440-21-3	0 - 1.64
Titanium dioxide	13463-67-7	0.219 - 0.752
Polybutylate	24936-97-8	0.273 - 0.383
Carbon	7440-44-0	0 - 0.274
Antimony trioxide	1309-64-4	0.112 - 0.190
Boron	7440-42-8	0 - 0.164
Phosphorus	7723-14-0	0 - 0.164
Sulfur	7704-34-9	0 - 0.109
D&C Green No. 6	128-80-3	0.0394 - 0.0578
Silicon dioxide	7631-86-9	0.00422 - 0.00592
Erucamide	112-84-5	0.000683 - 0.00128
4-Dodecylbenzenesulfonic acid	121-65-3	0.000286 - 0.000430

## 14.0 Summary of Safety and Clinical Performance (SSCP)

The SSCP has been adapted in accordance with the clinical evaluation assessment. The SSCP contains a relevant summary of the same information.

Conformity with the Alterra platform and the SAPIEN 3 platform of the performance requirements for safety, performance, acceptability of side-effects, usability, device lifetime, and acceptable benefit-risk profile has been established for the labelled indications.

Refer to <https://meddeviceinfo.edwards.com/> for a SSCP for this medical device.

## 15.0 Basic Unique Device Identification-Device Identifier (UDI-DI)

**Table 6**

Product Name	Model	Basic UDI-DI
Edwards SAPIEN 3 transcatheter heart valve (29 mm)	9600TFX29	0690103D003SAP000VP
Edwards SAPIEN 3 pulmonic delivery system	9630PL29	0690103D003COM000TC
Edwards eSheath+ introducer set	916ESP	0690103D003S3E000NT
Edwards crimper	9600CR	0690103D003CRI000TH
Edwards Alterra adaptive prestant system	29AP4045	0690103D003AAP000ND
Inflation device	96406	0690103D003IND000TG

## 16.0 Expected Lifetime of the Device

The Edwards SAPIEN 3 transcatheter pulmonary valve system with Alterra adaptive prestant has been subjected to rigorous pre-clinical durability testing per the testing requirements and in clinical studies and post market studies. The valve with prestant has been successfully tested to 5 years of simulated wear. In addition, clinical data show durability with follow-up to 2 years. The actual lifetime performance is continuing to be studied and varies from patient to patient.



## Symbol Legend

	English
<b>REF</b>	Reorder Number
<b>#</b>	Model Number
cm	Usable length
	Do not re-use
<b>LOT</b>	Lot Number
	Caution
	Consult instructions for use
	Consult instructions for use on the website
	Do not use if package is damaged and consult instructions for use
	Exterior diameter
	Inner diameter
	Store in a cool, dry place
	Keep dry
	Keep away from sunlight
<b>UDI</b>	Unique Device Identifier
	Temperature limit
<b>STERILE</b>	Sterile
<b>STERILE EO</b>	Sterilized using ethylene oxide

	English
<b>STERILE R</b>	Sterilized using irradiation
	Do not re-sterilize
eSheath	eSheath compatibility
eSheath™	eSheath compatibility
	Single sterile barrier system
	Single sterile barrier system with protective packaging inside
<b>QTY</b>	Quantity
	Use-by date
<b>SN</b>	Serial Number
	Manufacturer
	Date of manufacture
<b>EC REP</b>	Authorized representative in the European Community/European Union
<b>GWC</b>	Guidewire compatibility
<b>NP</b>	Nominal Pressure
<b>RBP</b>	Rated burst pressure
	Recommended guidewire length
Sheath	Minimum sheath size
Catheter	Catheter shaft size

	English
	Importer
	Balloon diameter
	Balloon working length
<b>20 mm</b>	For use with size 20 mm Edwards transcatheter heart valve
<b>23 mm</b>	For use with size 23 mm Edwards transcatheter heart valve
<b>26 mm</b>	For use with size 26 mm Edwards transcatheter heart valve
<b>29 mm</b>	For use with size 29 mm Edwards transcatheter heart valve
	[Implant only] The implant device has been determined to be MR Conditional when used under the conditions listed in the instructions for use.
	Contents
	Non-pyrogenic
<b>MD</b>	Medical device
	Contains biological material of animal origin
<b>Rx only</b>	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.
	Time & Temperature Sensitive
	Contains hazardous substances
<b>SZ</b>	Size

**Note:** Not all symbols may be included in the labeling of this product.



Edwards

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