EDWARDS INTUITY Elite Valve System
Aortic Valve, Model 8300AB
Delivery System, Model 8300DB

Instructions for Use

For single use only

1.0 Device Description

1.1 General

The EDWARDS INTUITY Elite valve system consists of the EDWARDS INTUITY Elite valve, model 8300AB and the EDWARDS INTUITY Elite delivery system, model 8300DB.

The pericardial stented aortic valve is based on the design and the proven performance of the PERIMOUNT valve family. A balloon expandable stainless steel cloth-covered frame is incorporated into the inflow aspect of the valve. The valve is implanted with the aid of a delivery system, which incorporates a balloon catheter used to expand the frame within the left ventricular outflow tract (LVOT). The expandable frame works in conjunction with the sewing ring to position and stabilize the valve at implant. The system reduces the number of sutures required to secure the valve, while establishing the seal between the aortic annulus and the frame. The system may be used in both traditional and less invasive surgical procedures for heart valve replacement.

1.2 EDWARDS INTUITY Elite Valve

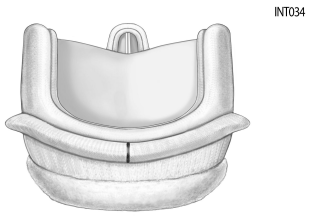


Figure 1

The model 8300AB is a stented trileaflet valve (Figure 1) comprised of bovine pericardium treated with the Carpentier-Edwards ThermaFix process. The leaflets are mounted on a flexible cobalt-chromium alloy wireform. The inflow of the valve incorporates the cloth-covered balloon expandable frame. The EDWARDS INTUITY Elite valve system is available in sizes 19, 21, 23, 25, and 27 mm (Table 1).

The valve is packaged and terminally liquid sterilized in glutaraldehyde. Glutaraldehyde is shown to both reduce the antigenicity of tissue xenograft valves and increase tissue stability (Refs. 1 & 2).

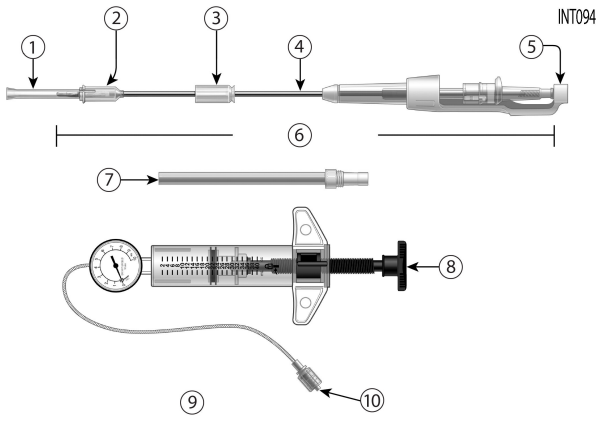
The wireform is made of cobalt-chromium alloy. The wireform is covered with a knitted polyester fabric. A thin, cobalt-chromium alloy/polyester film laminate band surrounds the base of the wireform. A silicone sewing ring which is covered with a porous, seamless polytetrafluoroethylene (PTFE) cloth is attached to the wireform. The scalloped sewing ring is designed to conform to the native aortic annulus. The compliant nature of the sewing ring facilitates coaptation between the valve and an often irregular or calcific tissue bed. The sewing ring has three suture markers to aid in valve orientation.

A holder is attached to the valve by means of sutures to facilitate handling, deployment, and suturing the valve during the implant procedure. The holder is easily detached by the surgeon. (Refer to Section 11.4 "Preparation Instructions").

1.3 Delivery System and the Inflation Device

The EDWARDS INTUITY Elite delivery system model 8300DB is designed to introduce the model 8300AB valve to the surgical site after removal of the diseased native leaflets. A delivery system is available for each size of the aortic valve.

The delivery system includes an integrated balloon catheter and malleable tubular handle shaft through which the catheter extends. The distal end of the handle shaft includes an adapter, which mates with the holder of the valve, and a locking sleeve for rapidly connecting the delivery system to the valve holder. The balloon portion of the delivery system resides within the adapter, and advances distally into position for expanding the frame. A tubular balloon introducer is attached when removing the valve from a storage jar and facilitates passage of the balloon through the valve (Figure 2).



1. Balloon Cover
2. Adapter
3. Locking Sleeve
4. Malleable Handle
5. Luer Guard
6. Balloon Catheter
7. Insertion Tool/Balloon Introducer
8. Plunger
9. Inflation Device
10. Luer Connector

Figure 2: EDWARDS INTUITY Elite Delivery System, Model 8300DB & Inflation Device, Model 96417

The inflation device is used to pressurize and expand the balloon. Refer to the inflation device manufacturer Instructions for Use for additional information.

The benefits of this device include improvement in aortic valve function and longevity, acute relief of symptoms, and improvement in morbidity and mortality.

2.0 Intended Use and Indications for Use

2.1 EDWARDS INTUITY Elite Valve, Model 8300AB

The EDWARDS INTUITY Elite valve, Model 8300AB, is intended for use as a heart valve replacement.

The EDWARDS INTUITY Elite valve, Model 8300AB, is indicated for patients who require replacement of their native or prosthetic aortic valve.

For the use of this device in patients with a previous surgical aortic valve, careful operative assessment is recommended to ensure that the EDWARDS INTUITY Elite valve is optimally implanted.

2.2 EDWARDS INTUITY Elite Delivery System, Model 8300DB

The delivery system is intended to facilitate introduction of the valve into the patient's native annulus.

3.0 Contraindications

3.1 EDWARDS INTUITY Elite Valve

The model 8300AB valve is contraindicated for patients with the following conditions:

- pure aortic insufficiency
- aneurysms of the aortic root or ascending aorta
- history of active endocarditis/myocarditis within three months of scheduled surgery

3.2 EDWARDS INTUITY Elite Delivery System

The model 8300DB delivery system is contraindicated for use with valves other than the model 8300AB. It is also contraindicated for use in valvuloplasty.

4.0 Warnings

FOR SINGLE USE ONLY. This device is designed, intended, and distributed for SINGLE USE ONLY. DO NOT RESTERILIZE OR REUSE THIS DEVICE. There are no data to support the sterility, non-pyrogenicity, and functionality of the device after reprocessing. Resterilization could lead to injury or infection, as the device may not function as intended.

Exposure of the valve, container, or delivery system to any sterilization method will render the valve or delivery system unfit for use.

DO NOT USE the valve or delivery system if the expiration date has elapsed. There are no data to support the function and performance of the device beyond the expiration date.

DO NOT EXPOSE the valve or delivery system to any solutions, chemicals, antibiotics, etc., except for the storage solution or sterile physiological saline solution. Irreparable damage to the leaflet tissue, which may not be apparent under visual inspection, may result.

DO NOT GRASP the leaflet tissue of the valve with instruments or cause any damage to the valve. Even the most minor leaflet tissue perforation may enlarge in time to produce significant impairment of valve function.

DO NOT FREEZE OR EXPOSE THE VALVE TO EXTREME HEAT. Exposure to extreme temperatures will render the device unfit for use.

DO NOT USE the valve if the tamper evident seal on the jar is broken.

DO NOT USE the delivery system if the tamper evident band is broken.

DO NOT USE if the packaging seal is broken or if the packaging is damaged.

DO NOT USE if the EDWARDS INTUITY Elite valve system has been dropped, damaged, or mishandled in any way. Should the device be damaged during insertion, do not attempt repair. Such action could lead to illness or an adverse event, as the device may not function as originally intended.

The safety and effectiveness of the valve has not been established for patients who have a congenital bicuspid or unicuspid aortic valve, because it has not been studied in these populations.

As with any implanted device, there is potential for the patient to develop an immunological response. Refer to Section 13.0 Qualitative and Quantitative Information for a listing of materials and substances in this device. Patients with hypersensitivities to cobalt, chromium, nickel, molybdenum, manganese, carbon, beryllium, iron, and bovine tissue may have an allergic reaction to these materials. Care should be exercised in patients with hypersensitivities to these materials.

This device was manufactured without latex, but may have been produced in a latex-containing environment.

5.0 Precautions

Clinical data that establish the safety and efficacy of the valve for use in patients under the age of 20 are not available; therefore, careful consideration of its use in younger patients is recommended.

Based on reports in the literature on tissue valves (Refs. 3, 4, 5, 6, 7, 8), there appears to be an increased incidence of leaflet calcification in patients under the age of 20.

Glutaraldehyde may cause irritation of the skin, eyes, nose, and throat. Avoid prolonged or repeated exposure 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 the eyes, seek immediate medical attention. For more information about glutaraldehyde exposure, please refer to the Material Safety Data Sheet available from Edwards Lifesciences.

6.0 Adverse Events

The following complications may be present clinically, such as: abnormal heart murmur, shortness of breath, exercise intolerance, dyspnea, orthopnea, anemia, fever, arrhythmia, paralysis, difficulties with speech, low cardiac output, pulmonary edema, congestive heart failure, cardiac failure, and myocardial infarction (MI).

As with all prosthetic heart valves, serious adverse events, sometimes leading to death, may be associated with the use of tissue valves. In addition, adverse events due to individual patient reaction to an implanted device, or to physical or chemical changes to the components, particularly those of biological origin, may occur at varying intervals (hours or days) necessitating reoperation and replacement of the prosthetic device. Adverse Events potentially associated with the use of bioprosthetic heart valves and aortic valve replacement surgery include but are not limited to:

- Allergic reaction to valve materials
- Annulus (damage, dissection, tear)
- Aorta (damage, dissection, tear)
- Blood - Coagulopathy
- Blood - Hemolysis
- Blood - Hemorrhage/anemia
- Blood pressure alteration (hypotension, hypertension)
- Cardiac arrest/Asystole

- Cardiac arrhythmias/conduction disturbances
- Cardiac failure (heart failure)
- Chordae tendineae damage (mitral valve)
- Coronary artery ostia blockage
- Death
- Device instability/migration/embolization
- Endocarditis
- Explant/Reoperation
- Infection - Local and/or Systemic
- Leaflet impingement (aortic or mitral valve)
- Left Ventricular outflow tract damage
- Myocardial Infarction (MI)
- Neurologic Events
  - Stroke
  - Transient ischemic attack (TIA)
- Patient prosthesis mismatch (PPM) (due to inappropriate sizing)
- Pericardial Tamponade
- Permanent pacemaker implant (PPI)
- Reduced exercise tolerance/shortness of breath
- Tissue Leaflet damage (from instruments or sutures)
- Thromboembolism
- Valvular leaking
  - Regurgitation - Aortic insufficiency
  - Paravalvular leak
  - Transvalvular leak
- Valve - Nonstructural dysfunction
- Valve - Structural dysfunction/deterioration
  - Valve stent fracture
  - Valve stent separation
  - Annulus frame fracture
  - Annulus frame separation
- Valve - Thrombosis
- Valve frame distortion (from chest compression or trauma)

Calcific and non-calcific (fibrotic) degeneration of bioprosthetic valves is reported with use of chemo-radiotherapy to treat malignant conditions. (Ref. 9 & Ref. 10)

It is possible that these complications may lead to:

- Reoperation
- Explantation
- Permanent disability
- Death

7.0 Clinical Studies

7.1 TRANSFORM Trial

The clinical safety and effectiveness of the EDWARDS INTUITY Elite valve system was established based on the outcome data of the TRANSFORM trial. The objective of this study was to assess the safety and effectiveness of the EDWARDS INTUITY Elite valve system in patients with aortic stenosis or mixed stenosis-insufficiency requiring replacement of the aortic valve.

The TRANSFORM trial is an open-label, prospective, non-randomized, multicenter observational trial without concurrent or matched controls. Following a pre-operative assessment, subjects were seen for follow-up at 3 months postoperatively, one year postoperatively, and annually thereafter for up to seven years post-surgical experience. Follow-up visit at 6 months postoperatively was required for subjects with device-related conduction disturbances or paravalvular leak greater than mild (2+) severity per the Echocardiography Core Laboratory for the trial.

The trial population consists of adult subjects (18 years or older) diagnosed with aortic valve disease requiring a planned replacement of the aortic valve. Concomitant coronary bypass surgery was permitted.

Trial candidates diagnosed with pure aortic insufficiency were excluded from participation. Candidates with prior valve replacement (any position) or prior valve surgery for which a prosthetic valve or annuloplasty ring remained in situ were also excluded. Multiple valve repairs or replacements were not permitted. Certain planned non-cardiac surgeries were not permitted. Various clinical presentations and histories caused exclusion from the trial.

Otherwise qualified candidates were excluded from study participation based on the following intraoperative exclusion criteria:

- anomalous coronary arteries
- annular deformation or extensive calcification of the annulus or aortic root which cannot be removed
- significant calcium on the anterior mitral leaflet
- pronounced septal calcification
- position of coronary ostia relative to the valve that would result in obstruction of blood flow

Finally, if a suitably sized device was not available for a particular annulus, the candidate was excluded from participation in the study.

The reporting period for the TRANSFORM trial is September 2012 through October 2021. There were 934 patients enrolled at 29 investigational sites. Of the enrolled population, 885 patients were successfully implanted with the EDWARDS INTUITY Elite valve in the aortic position. Among the 934 enrolled patients, there were 49 patients who experienced failure to implant.

The 885 implanted patients had a mean follow-up of 5.0 ± 2.0 years, a range of follow-up of 0 to 8.3 years, and a total cumulative follow-up of 4398.8 patient-years. There were 4326.4 late patient-years of follow-up for the implanted patients.

Table 3 provides trial demographics, NYHA Classification and Risk Scores; Table 4 lists the observed adverse event rates during the study; Table 5 provides NYHA Classification data at baseline, 1 year, 5 years and 7 years follow-up; and Table 6 lists hemodynamic parameters at 1 year, 5 years, and 7 years follow-up.

7.2 TRITON Trial

The objective of the TRITON trial was to confirm that the safety and performance of the EDWARDS INTUITY valve system was not adversely affected by the addition of a balloon expandable frame.

The TRITON trial was an open-label, prospective, non-randomized, multicenter trial without concurrent or matched controls. Following a pre-surgical assessment, subjects were followed for one year to assess primary safety and effectiveness. Subjects were followed annually thereafter for five years post-surgical experience.

The trial population consisted of adult subjects (18 years or older) diagnosed with aortic valve disease requiring a planned replacement of the aortic valve. Concomitant coronary bypass surgery was permitted.

Trial candidates diagnosed with pure aortic insufficiency were excluded from participation. Candidates with prior valve replacement (any position) or prior valve surgery for which a prosthetic valve or annuloplasty ring remained in situ were also excluded. Multiple valve repairs or replacements were not permitted. Certain planned non-cardiac surgeries were not permitted. Various clinical presentations and histories caused exclusion from the trial.

Otherwise, qualified candidates were excluded from study participation based on the following intraoperative exclusion criteria:

- Septal hypertrophy that will not be corrected by myectomy, or pronounced septal calcification
- annular deformation or extensive calcification of the annulus or aortic root which cannot be removed
- significant calcium on the anterior mitral leaflet which cannot be removed
- extensive calcification of the aortic root
- left atrial thrombus
- the subject is hemodynamically unstable during the procedure requiring the procedure to be aborted prior to insertion of the investigational bioprosthesis and delivery system
- position of coronary ostia relative to the valve that would result in obstruction of blood flow
- annular deformation which may or may not be caused by too extensive decalcification of the aortic annulus

Finally, if a suitably sized device was not available for a particular annulus, the candidate was excluded from participation in the study.

The reporting period for the TRITON trial was January 2010 through May 2018. There were 295 patients enrolled at 6 investigational European sites. Of the enrolled population, 287 patients were successfully implanted with the EDWARDS INTUITY valve in the aortic position. Among the 295 enrolled patients, there were 8 patients who experienced failure to implant.

The 287 implanted patients had a mean follow-up of 4.3 ± 1.5 years, a range of follow-up of 0 to 6.1 years, and a total cumulative follow-up of 1229.3 patient-years. There were 1206.1 late patient-years of follow-up for the implanted patients.

Table 7 provides trial demographics, NYHA Classifications and Risk Scores; Table 8 lists the observed adverse event rates during the study; Table 9 provides NYHA Classification data at baseline and 1 year and 5 years follow-up; and Table 10 lists hemodynamic parameters at 1 year and 5 years follow-up.

7.3 Permanent Pacemaker Implantation

Permanent Pacemaker Implant (PPI) rates from the US (TRANSFORM), and EU (TRITON) pre-market studies, and literature reported ranges for rapid deployment valves and surgical aortic valves are provided in Table 11.

The rate of Permanent Pacemaker Implantation (PPI) for the EDWARDS INTUITY Elite valve is within the range reported in the literature for rapid deployment valves (Ref. 11, 12, 13). The rates of PPI for rapid deployment valves, including the EDWARDS INTUITY Elite valve are higher than those reported for surgical aortic valves (Ref. 11).

It is important that the surgeon and the multi-disciplinary heart team decide when the implantation of the EDWARDS INTUITY Elite valve system is necessary and feasible, weighing whether the benefits outweigh the risks.

8.0 Individualization of Treatment

Bioprosthetic heart valve recipients should be maintained on anticoagulation therapy, except where contraindicated, during the initial stages after implantation as determined by the physician on an individual basis and as per guidelines (Refs. 14 & 15). Long-term anticoagulation and/or antiplatelet therapy should be considered for patients with risk factors for thromboembolism. Guidelines also recommend how to manage patients with bioprosthetic valve dysfunction and prophylaxis for infective endocarditis (Refs. 14 & 15).

8.1 Considerations in bioprosthetic valve selection

The ultimate judgment regarding care of a particular patient must be made by the healthcare provider and patient in light of all the circumstances presented by that patient. The ESC/EACTS (Ref. 14) and ACC/AHA (Ref. 15) Guidelines contain the complete recommendations for bioprosthetic valve selection.

Edwards encourages surgeons to participate in available registries when the EDWARDS INTUITY Elite valve is implanted in younger patients.

8.2 Specific Patient Populations

The safety and effectiveness of the model 8300AB valve has not been established for the following specific populations because it has not been studied in these populations:

- Patients who are pregnant;
- Nursing mothers;
- Patients with abnormal calcium metabolism (e.g., chronic renal failure, hyperparathyroidism);
- Patients with aneurysmal aortic degenerative conditions (e.g., cystic medial necrosis, Marfan's syndrome);
- Children, adolescents, and young adults;
- Patients with hypersensitivity to metal alloys that contain cobalt, chromium, nickel, molybdenum, manganese, carbon, beryllium and iron;
- Patients with hypersensitivity to latex;
- Patients with hypersensitivity to tissue with alpha-gal antigen

9.0 Patient Counseling Information

Careful and continued medical follow up (at least by an annual visit to the physician) is advised so that device related complications, particularly those related to material failure, can be diagnosed and properly managed. Patients with valves are at risk from bacteremia (e.g., undergoing dental procedures) and should be advised about prophylactic antibiotic therapy.

Patients should be encouraged to carry their Implant card at all times and to inform their healthcare providers that they have an implant when seeking care.

It is recommended that patients be briefed on warnings, precautions, contraindications, measures to be taken and limitations of use associated with the EDWARDS INTUITY Elite valve system.

10.0 How Supplied

10.1 Packaging

The net content of the Edwards INTUITY Elite valve system is one (1) valve, one (1) delivery system, and one (1) inflation device.

The valve is provided sterile and nonpyrogenic, and is packaged terminally liquid sterilized in glutaraldehyde, inside a sealed plastic jar.

Each valve is contained in a carton with a temperature indicator displayed through a window on the side panel. The temperature indicator is intended to identify products which have been exposed to transient temperature extremes. Please refer to the "Storage" section for product storage conditions. Upon receipt of the valve, immediately inspect the indicator and refer to the carton label to confirm a "Use" condition. If the "Use" condition is not apparent, do not use the valve and contact the local supplier or Edwards Lifesciences representative to make arrangements for return authorization and replacement.

The delivery system is packaged in a double tray configuration. The delivery system is sterilized by E-beam.

An inflation device (model 96417) is provided for use with the delivery system. Refer to the inflation device package insert for Instructions for Use.

10.2 Handling and Preparation Instructions

Once the appropriate valve system size is chosen remove the delivery system tray package from the carton in the non-sterile

field. Before opening, examine the package for evidence of damage. Open the delivery system outer tray using aseptic technique. Place sterile inner tray containing the delivery system in the sterile field. (Refer to Section 11.3 for instructions on sizing of the valve.)

WARNING: Valve holders and non-metallic parts of the delivery system are not radiopaque and cannot be located by means of an external imaging device. Loose fragments in the vasculature have the potential to embolize.

WARNING: DO NOT USE the valve if the tamper evident seal on the jar is broken.

WARNING: DO NOT USE the valve if the container is leaking, damaged or the glutaraldehyde solution does not completely cover the valve.

WARNING: Careful handling is required for all devices. If the valve and/or delivery system are dropped, damaged, or mishandled in any way, it must not be used.

CAUTION: Be sure to remove the product identification tag prior to implant of the valve.

10.3 Storage

The valve should be stored at 10-25 °C, (50-77 °F). Stock inspection and rotation at regular intervals are recommended to ensure that the valve and delivery systems are used before the expiration date stamped on the package label.

Products found to have been subjected to freezing or excessive heat later than 3 days following receipt will be considered to have resulted from environmental conditions within the control of the customer.

The delivery system should be stored in a cool, dry place.

WARNING: Carefully inspect the valve before implantation for evidence of extreme temperature exposure or other damage. Exposure of the valve to extreme temperatures will render the device unfit for use.

CAUTION: Always store the valve in a dry, contamination-free area. Any valve that is frozen, or is suspected of having been frozen, should not be used for human implant.

11.0 Directions for Use

11.1 User Training

The primary intended users are cardiac surgeons who perform these valve replacements and the staff (operating room nurses and technicians) responsible for preparation and implant of aortic or mitral valves.

Physician and staff training are required prior to use of the EDWARDS INTUITY Elite valve system. To ensure high technical success, the EDWARDS INTUITY Elite valve system should be used only by physicians trained on its preparation and implantation technique.

11.2 Accessories

Aortic Sizers, model 1133

The use of a sizing instrument facilitates selection of the correct size valve for implant, and a sizer is available for each size of the valve. The tray (model TRAY1133) is used to sterilize and store the accessories before and after use. Refer to the appropriate accessory Instructions for Use for details on cleaning, rinsing, disinfection, and sterilization of sizers.

WARNING: Fragments of the sizers are not radiopaque and cannot be located by means of an external imaging device. Loose fragments in the vasculature have the potential to embolize.

CAUTION: Examine sizers for signs of wear such as dullness, cracking or crazing, prior to use. Replace sizers if any deterioration is observed. Continued use may result in fragmentation, embolization, and/or prolonged procedure.

CAUTION: Do not use other manufacturers' valve sizers, or sizers for other Edwards Lifesciences valves, to size the EDWARDS INTUITY Elite valve, Model 8300AB. Incorrect sizing may occur, which may result in valve damage, localized native tissue damage, and/or inadequate hemodynamic performance.

CAUTION: The sizers are supplied nonsterile and must be cleaned and sterilized before use. Refer to the Sizer Instructions for Use for cleaning instructions.

11.3 Sizing

The final decision to use the EDWARDS INTUITY Elite valve system should be made after the native aortic valve is excised and the annulus is debrided or decalcified. An assessment of the potential interaction between the EDWARDS INTUITY Elite valve system and surrounding cardiac structures – such as, the aortic annulus, anterior leaflet of the mitral valve, and coronary ostia – should be conducted to inform appropriate use of the device. Failure to consider these factors may lead to implant failure and clinical complications including, but not limited to, interference with mitral valve function and severe conduction disturbances requiring permanent pacemaker implantation.

1. Surgically remove the diseased or damaged native valve leaflets and perform debridement as you would normally do for any conventional surgical valve. Debride calcium from the annulus, left ventricular outflow tract (LVOT) and the anterior mitral valve leaflet. The inside of the annulus and LVOT should be smooth to ensure proper seating of the prosthetic valve to achieve a good seal and minimize the risk of paravalvular leaks.

   WARNING: Avoid excessive debridement to the extent that it may result in annular injury or create divots, compromise the integrity of the aortic annulus and/or result in paravalvular leak. Excessive subannular debridement may cause conduction abnormalities.

   WARNING: Severely calcified LVOT that is not properly debrided may result in balloon rupture during inflation.

   CAUTION: When choosing a valve, the size, age, and physical condition of the patient in relation to the size of the prosthesis must be taken into consideration to minimize the possibility of obtaining a suboptimal hemodynamic result. The selection of a valve must ultimately be made by the physician on an individual basis after carefully weighing all of the risks and benefits to the patient.

   A combined intra- and supra-annular sizing technique is recommended for EDWARDS INTUITY Elite valve.

   CAUTION: The practice of using only a supra-annular sizing technique for the EDWARDS INTUITY Elite valve is not recommended. Due to the intra-annular and sub-annular aspects of the EDWARDS INTUITY Elite valve, it is recommended to use both sizing techniques.

   Intra-annular sizing

2. Insert the sizer barrel end through the aortotomy and place it into the aortic root and annulus.

   CAUTION: If a transverse aortotomy is used and the sinotubular junction diameter is estimated to be equal or smaller than the annulus diameter, it is recommended to extend aortotomy into the non-coronary sinus to facilitate sizer and implant insertion. If extension of the aortotomy is not possible, it is not recommended to use the product as parachuting the valve through a narrow sinotubular junction may result in increased difficulty of valve implant and/or aortic injury.

3. Size the valve choosing the largest diameter barrel end that is a comfortable fit in the annulus. Ensure the lip of the barrel does not pass through the annulus (Figure 3). The lip of the barrel represents the sewing cuff of the valve, therefore it is intended to rest on the annulus and not go through it.

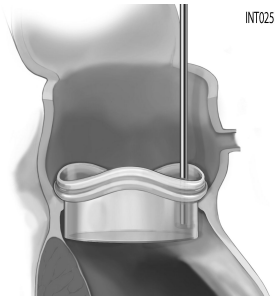


Figure 3

WARNING: Do not implant a valve larger than the size indicated by the barrel end of the sizer. Due to the sub-annular frame expansion of the valve, oversizing may lead to conduction abnormalities.

WARNING: Do not select a valve size based on the sizer that will fit through the sinotubular junction as it may result in paravalvular leak due to the use of an undersized valve.

Supra-annular sizing

4. The replica end of the same sizer may be used to verify adequate fit and orientation of the supra-annular section of the valve in the aortic root. Adequate fit includes good seating on the aortic annulus and no interference of the commissure posts of the valve with the aortic wall at the sinotubular junction or with the coronary ostia (Figure 4). Use black orientation markers on the replica end to assess guiding suture placement in the annulus.

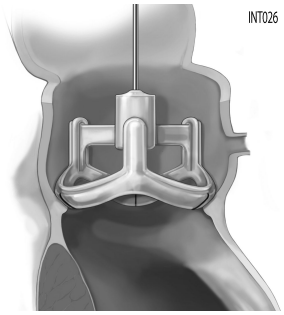


Figure 4

11.4 Preparation Instructions

Once the valve size has been determined and the decision to use the product is made, preparation of the delivery system and valve is initiated. The balloon catheter and inflation device can be prepared concurrently while three equally spaced sutures required to fixate the valve are being placed through the aortic annulus, preferably at the nadir of each cusp. Implantation of the valve is described in Section 11.5.

1. Remove tamper evident band over delivery system and inflation device. Ensure that the selected delivery system size corresponds to the valve size.

   WARNING: Prior to use, verify that the size printed on the delivery system packaging corresponds with the appropriate size valve for which it is to be used.

2. After opening the inner tray remove the insertion/balloon introducer assembly (Figure 5).

Figure 5

3. The valve is provided in a jar with a screw-cap closure and tamper evident seal. Remove the seal and turn the lid counter-clockwise to open the container. The contents of the jar (valve, holder, and sleeve) must be handled in an aseptic manner to prevent contamination. The outside of the jar is non-sterile.

   WARNING: Do not use if the packaging seals are broken or if the packaging has been damaged. Do not use if the valve is damaged.

   CAUTION: It is strongly recommended that the valve not be opened until time of implant. This is necessary to reduce the risk of contamination, because it is established that glutaraldehyde alone is not a 100% effective sterilant against all possible contaminants. No attempt should be made to resterilize the valve.

4. With the valve in the jar, remove the insertion tool/balloon introducer assembly from the tray and insert the balloon introducer side through the valve leaflets until it engages the valve holder. Turn the insertion tool clockwise threading the balloon introducer into the valve holder until it stops. Verify that the connection is tight (Figure 6).

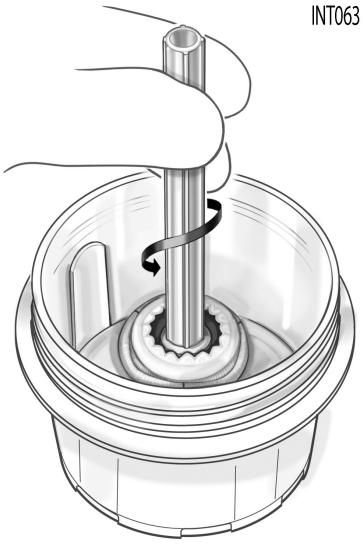


Figure 6

5. Once secured, remove the sleeve and valve from the jar using the insertion tool. Confirm that the balloon introducer proximal end protrudes through the valve holder as shown. This is necessary to assure secure connection with the delivery system (Figure 7).

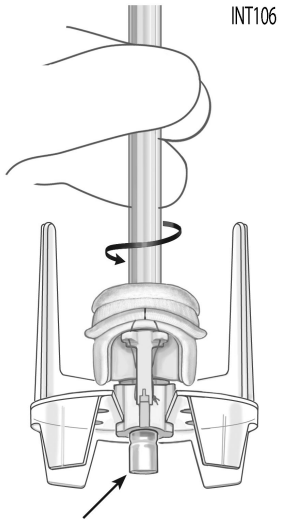


Figure 7

6. Remove the sleeve from the valve as shown in Figure 8.

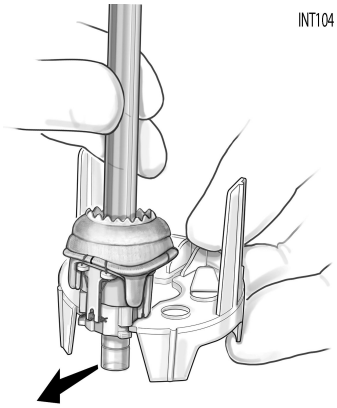


Figure 8

7. A serial number tag is attached to the sewing ring of each valve by a suture. Carefully remove the serial number tag by cutting the suture and gently removing the tag.

   CAUTION: This serial number should be checked against the number on the jar and implant card; if any difference is noted, the valve should be returned unused. This tag should not be detached from the valve until implant is imminent. Care should be exercised to avoid cutting or tearing the sewing ring cloth during removal.

   CAUTION: Verify that all system connections are secure and fully engaged prior to use.

8. Rinse the valve in sterile physiological saline for 1 minute. Fully submerge valve in rinse solution of approximately 500 ml sterile physiological saline. Slowly agitate the basin or the valve during the rinse cycle. Repeat this process once more using new saline solution for a minimum of 1 minute. Leave the valve submerged in the rinse basin until it is implanted.

   WARNING: The valve must be rinsed with sterile physiological saline prior to implant to reduce the glutaraldehyde concentration.

   WARNING: Do not add other solutions, drugs or chemicals to the glutaraldehyde or rinse solutions as this may result in irreparable damage to the tissue. Damage may not be apparent during visual inspections.

   WARNING: Do not allow the valve to dry. It must be kept moist at all times. Maintain tissue moisture with sterile physiological saline irrigation on both sides of the leaflet tissue.

   WARNING: Prior to use, verify that the size printed on the balloon catheter corresponds with the appropriate size valve for which it is to be used.

   CAUTION: Do not allow the leaflet tissue to contact the bottom or sides of the rinse basin.

   CAUTION: Avoid contact of the valve or the rinse solution with towels, linens or other sources of lint or particulate matter that may be transferred to the valve.

9. Remove the delivery system from the tray.

10. Remove the balloon cover from the balloon catheter. Ensure balloon does not advance (Figure 9). In cases where the balloon does advance, pinch the locking clips and fully retract the balloon (Figure 10).

Figure 9

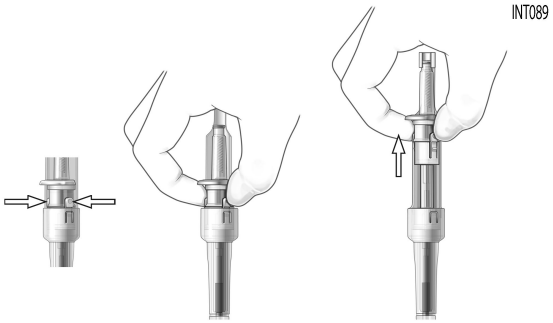


Figure 10

11. Insert the balloon on the delivery system through the valve holder until the scalloped features of the adapter sit inside the matching scalloped features of the holder. A slight rotation may be necessary to align the scalloped features (Figure 11).

    CAUTION: If there is any resistance engaging the adapter with valve holder, stop and verify that the correct size delivery system is being used with the valve.

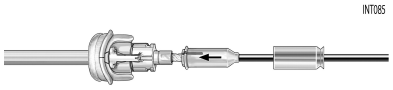


Figure 11

12. Advance the locking sleeve over the adapter until it clicks into place (Figure 12).

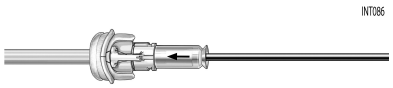


Figure 12

13. Stabilize the valve by holding the malleable aluminum shaft and remove the insertion tool by pulling away from the valve and holder (Figure 13).

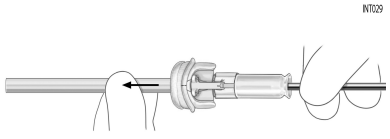


Figure 13

11.5 Implanting the Valve

1. Because pledgetted sutures are not recommended, avoid superficial suture placement through the native annulus,

place three equally spaced sutures through the native annulus, preferably at the nadir of each cusp.

WARNING: The use of sutures with pledgets or monofilament sutures is not recommended. The use of pledgets may create leak channels resulting in paravalvular leaks. The use of monofilament sutures and resulting suture tails may damage the leaflets.

2. Place each suture through the sewing ring in positions corresponding to the annular suture positions.

   CAUTION: Extreme care must be exercised when placing sutures through the sewing ring margin to avoid laceration of the leaflet tissue.

3. Parachute the valve into the annulus maintaining counter traction on the sutures (Figure 14).

   CAUTION: Avoid bending the malleable handle greater than 90 degrees.

   CAUTION: Avoid bending malleable handle more than three times.

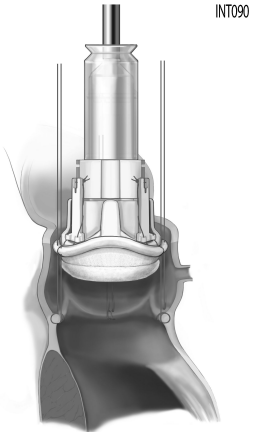


Figure 14

CAUTION: Do not advance the balloon catheter to the inflation position until the valve is properly positioned into the annulus to avoid potential injury to patient anatomy.

CAUTION: Suture tension must be maintained during parachuting to avoid frame and suture interference.

4. Once seated, hold the valve in place with the delivery system, and confirm the seating position of the valve into the annulus. The commissure posts should correspond to the remnants of the native valve commissures so as not to obstruct the coronary ostia.
5. Secure the valve by snares compressed with hemostats over the sewing ring. Refer to Figure 15.

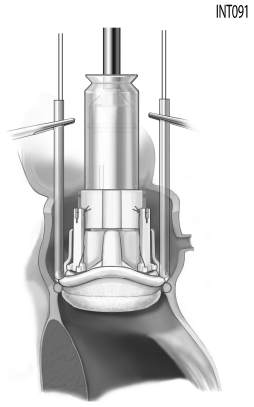


Figure 15

CAUTION: Ensure that snares are placed directly on the sewing ring not on the valve holder legs as this may result in loose sutures or difficulty in removing holder/ delivery system once the holder sutures are cut.

After securing the snares, appropriate valve seating should be confirmed by visual inspection. In particular, the valve must be firmly seated in the non-coronary sinus and no gaps should exist between the sewing cuff and the native annulus. If adjustment is necessary, the snares may be loosened and the valve repositioned.

6. Verify that the coronary ostia are not obstructed, the commissure posts do not interfere with the aortic wall at the sinotubular junction and there is good apposition between sewing ring and annulus.
7. Fill the inflation device with sterile physiological saline and remove any air to a final volume of 25 cc (Figure 16).

Figure 16

8. Advance the balloon catheter distally until the catheter snaps into place and an audible "click" is heard (Figure 17). Be sure to stabilize the handle while advancing the balloon catheter.

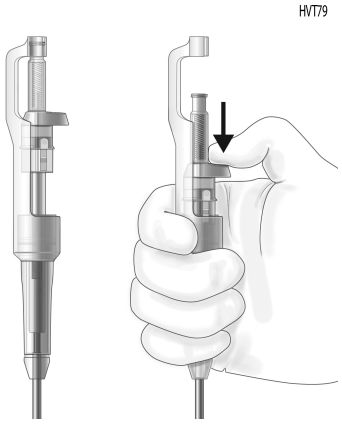


Figure 17

9. Attach the inflation device to the Luer inflation port on the balloon catheter (Figure 18).

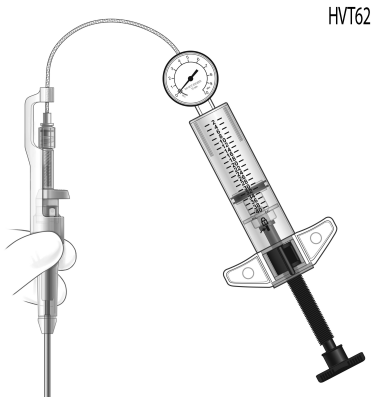


Figure 18

10. Ensure that the distal portion of the delivery system is perpendicular to the plane of the valve and apply gentle pressure in a distal direction to maintain proper valve seating during balloon inflation.

    CAUTION: The delivery system must be held in position during balloon inflation to ensure that the valve remains seated in the annulus.

11. Inflate the balloon to the appropriate inflation pressure as shown in Table 2. This is achieved as follows:

    - First unlock the inflation device
    - Advance the plunger until resistance is felt (Figure 19)

Figure 19

    - Lock the inflation device
    - Turn the knob for fine adjustments until the recommended nominal pressures are achieved and maintain nominal inflation pressure (Figure 20) as indicated on the delivery system for 10 seconds.

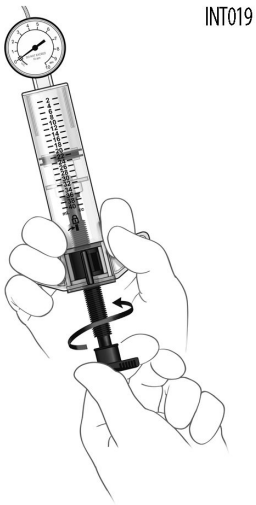


Figure 20

CAUTION: It is important to maintain inflation pressure by keeping an active hold on the knob, listed in Table 2; pressure must be maintained for 10 seconds to ensure proper frame expansion.

CAUTION: Overinflation may cause excessive frame expansion and may result in annular damage, conduction interference/arrhythmia or subannular tissue damage.

CAUTION: Underinflation may cause insufficient expansion of frame and may result in paravalvular leak.

12. If the inflation pressure is not achieved, completely deflate the balloon by fully retracting the syringe plunger. Remove the valve and delivery system beginning with the removal of the snares and sutures. Use a new valve and delivery system.

    CAUTION: Do not reinflate the balloon. The balloon is designed for single use.

    CAUTION: Do not retract the balloon catheter through the valve holder when removing the whole system to avoid possible valve displacement.

13. Once the inflation pressure is achieved and maintained for 10 seconds, deflate the balloon by unlocking the inflation device, fully retracting the plunger and locking the plunger in retracted position (Figure 21).

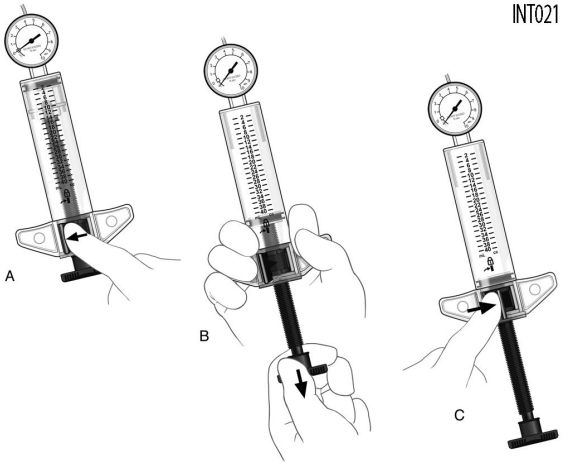


Figure 21

14. Cut each of the valve holder sutures utilizing a scalpel (Figure 22).

    CAUTION: Avoid cutting or damaging the valve when cutting the sutures. This may result in valve dysfunction.

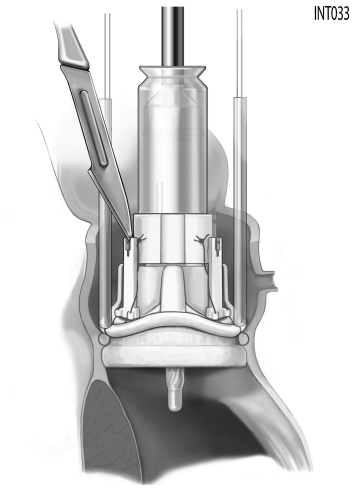


Figure 22

15. Remove the delivery system and valve holder as a unit.

    WARNING: Verify that the valve is properly seated in the annulus, there are no visible spaces between the valve and the annulus, the coronary ostia are not obstructed and the commissure posts do not interfere with the aortic wall at the sinotubular junction to ensure proper blood flow.

16. Remove one snare while maintaining valve seating position by applying downward pressure on the sewing ring and tie the suture. Repeat the process for the remaining two snares.

    WARNING: Use caution while removing delivery system and tying sutures to avoid valve displacement.

    WARNING: It is important to cut the sutures close to the knots and ensure that exposed suture tails will not come into contact with the valve leaflet tissue to prevent wear due to contact with the sutures (Ref. 8).

    WARNING: Do not pass catheters or transvenous pacing leads across the valve as this may cause tissue damage.

17. Close Aortotomy per procedure.

11.6 Return of Valves

Edwards Lifesciences is interested in obtaining recovered clinical specimens of the EDWARDS INTUITY Elite valves for analysis. Contact the local representative for return of recovered valves.

- Unopened Package with Sterile Barrier Intact: If the jar or package has not been opened, return the valve in its original packaging.
- Package Opened but Valve is Not Implanted: The unused valve should be placed into a suitable histological fixative such as 10% formalin or 2% glutaraldehyde and returned to the company. Refrigeration is not necessary under these circumstances.
- Explanted Valve: The explanted valve should be placed into a suitable histological fixative such as 10% formalin or 2% glutaraldehyde and returned to the company. Refrigeration is not necessary under these circumstances.

11.7 Device Disposal

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

12.0 Safety in the Magnetic Resonance (MR) Environment

MR Conditional

Non-clinical testing has demonstrated that the EDWARDS INTUITY Elite valve, model 8300AB is MR Conditional. A patient with this device can be safely scanned, immediately after placement of this device, in an MR system meeting the following conditions:

- Static magnetic field of 1.5 tesla and 3.0 tesla
- Maximum spatial field gradient of 2670 gauss/cm or less
- Maximum MR system-reported, whole body averaged specific absorption rate (SAR) of 2.0 W/kg in Normal Operating Mode

Under the scan conditions above, the model 8300AB is expected to produce a temperature rise of less than 2.0 °C after 15 minutes of continuous scanning.

In non-clinical testing, the image artifact caused by the device extends approximately 40 mm from the model 8300AB when imaged with spin echo or gradient echo pulse sequences and a 3.0 tesla MRI system. The lumen is partially to fully obscured under these conditions.

Optimization of MR imaging parameters is recommended.

13.0 Qualitative and Quantitative Information

This device contains or incorporates tissues or cells of animal origin. The valve leaflets are made of bovine pericardial tissue.

This device contains the following substances 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 of adverse reproductive effects.

The following table shows the qualitative and quantitative information on the materials and substances:

Substance	CAS	Model Mass Range (mg)
Polytetrafluoroethylene	9002-84-0	869 - 1392
Iron	7439-89-6	244 - 630
Polyethylene terephthalate	25038-59-9	190 - 303
Chromium	7440-47-3	116 - 269
Cobalt	7440-48-4	112 - 242
Nickel	7440-02-0	88.4 - 209
Collagens, bovine, polymers with glutaraldehyde	2370819-60-4	61.4 - 120
Polydimethylsiloxane	63148-62-9	40.6 - 106

Substance	CAS	Model Mass Range (mg)
Molybdenum	7439-98-7	27.4 - 67.2
Silicon dioxide	7631-86-9	16.6 - 44.4
Manganese	7439-96-5	5.01 - 28.6
Silicon	7440-21-3	0 - 11.6
Copper	7440-50-8	0 - 3.82
Barium sulfate	7727-43-7	1.18 - 3.03
Fibroin Silk	9007-76-5	2.39 - 2.79
Titanium dioxide	13463-67-7	0.401 - 0.978
Carbon	7440-44-0	0 - 0.820
Nitrogen	7727-37-9	0 - 0.765
Polyethylene terephthalate-isophthalate copolymer	24938-04-3	0.211 - 0.389
Antimony trioxide	1309-64-4	0.163 - 0.302
Phosphorus	7723-14-0	0 - 0.250
Octamethylcyclotetrasiloxane; D4	556-67-2	0.0625 - 0.161
Sulfur	7704-34-9	0 - 0.136
Beeswax	8012-89-3	0.0770 - 0.104
Carbon black	1333-86-4	0.0368 - 0.0588
Decamethylcyclopentasiloxane; D5	541-02-6	0.0165 - 0.0425
Dodecamethylcyclohexasiloxane; D6	540-97-6	0.0112 - 0.0288
Logwood Extract Dye	475-25-2	0.0193 - 0.0223
Beryllium	7440-41-7	0 - 0.00591
Erucamide	112-84-5	0.00322 - 0.00573
2,5-Bis(5-tert-butyl-2-benzoxazolyl)thiophene	7128-64-5	0.000285 - 0.000567
4-Dodecylbenzenesulfonic acid	121-65-3	0.000214 - 0.000345

14.0 Summary of Safety and Clinical Performance (SSCP)

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

After the launch of the European Database on Medical Devices/ Eudamed, refer to https://ec.europa.eu/tools/eudamed for a SSCP for this medical device.

15.0 Patient Labeling

A patient implant card is provided with each valve. 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.

16.0 Basic Unique Device Identification Device Identifier (UDI-DI) Information

The Basic UDI-DI is the access key for device-related information entered in the Eudamed.

The following table contains the Basic UDI-DI:

Product	Model	Basic UDI-DI
EDWARDS INTUITY Elite Valve	8300AB	0690103D002IEV000TS
EDWARDS INTUITY Elite Delivery System	8300DB	0690103D002IED000PU
Edwards Inflation Device	96417	0690103D002EID000PL

17.0 Expected Lifetime of the Device

The expected lifetime of the EDWARDS INTUITY Elite valve is supported by pre-clinical durability, fatigue reliability testing, and 7 years of clinical follow-up in the TRANSFORM trial; refer to Section 7.0 Clinical Studies for additional information regarding the clinical trial. Actual lifetime performance depends on multiple biological factors and can vary from patient to patient.

18.0 References

1. Carpentier, A., et al. Biological Factors Affecting Long-Term Results of Valvular Heterografts. *J. Thorac. Cardiovasc. Surg.* 1969, 58:467-483.
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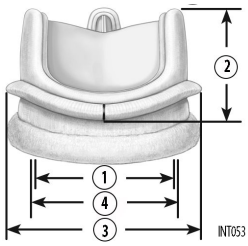
15. Writing Committee M, Otto CM, Nishimura RA, et al. 2020 ACC/AHA Guideline for the management of patients with valvular heart disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *J Thoracic Cardiovasc Surg*. Aug 2021; 162(2):e183-e353. doi: 10.1016/j.jtcvs.2021.04.002

For a patient/user/third party in the European Economic area; if, during the use of this device or as a result of its use, a serious incident has occurred, please report it to the manufacturer and your national competent authority, which can be found at http://ec.europa.eu/growth/sectors/medical-devices/contacts_en.

Refer to the symbol legend at the end of this document.

Table 1: Nominal Dimensions (mm) EDWARDS INTUITY Elite Valve



Legend
1. Internal Diameter
2. Profile Height
3. External Sewing Ring Diameter
4. Stent Diameter (wireform)*

Size	19 mm	21 mm	23 mm	25 mm	27 mm
1. Internal Diameter	18	20	22	24	26
2. Profile Height	13	14	15	16	17
3. External Sewing Ring Diameter	24	26	28	30	32
4. Stent Diameter (wireform)*	19	21	23	25	27
*TAD (Tissue Annulus Diameter)					

Note: ***for sizing, refer to Section 11.3 "Sizing"***

Table 2: Balloon Inflation Pressure

Valve Size	Inflation Pressure (ATM)	Rated Burst Pressure (ATM)
19 mm	4.5	7.0
21 mm	4.5	7.0
23 mm	4.5	7.0
25 mm	5.0	7.0
27 mm	5.0	7.0

Table 3: TRANSFORM Trial Study Demographics

Factor	ALL SUBJECTS
Age at Implant	**N: Mean ± SD (Min-Max)**
Age (years)	934: 73.4 ± 8.3 (34.0-95.0)
Sex	**% (n/N)**
Female	36.0% (336/934)
Male	64.0% (598/934)
NYHA Classification	**% (n/N)**
Class I	15.1% (141/931)
Class II	53.3% (496/931)
Class III	30.0% (279/931)
Class IV	1.6% (15/931)
Risk Scores	**N: Mean ± SD (Min-Max)**
EuroSCORE II (%)	934: 3.4 ± 3.4 (0.5-31.6)
STS (%)	807: 2.5 ± 1.8 (0.4-14.6)

N is the number of subjects with available data for the given parameter.

STS scores only calculated for subjects who are undergoing isolated AVR or AVR + CABG only.

Table 4: TRANSFORM Observed Adverse Events

Endpoint	Early (≤30 POD) N =885 n, m (%)	Late (>30 POD) Late pt-yrs =4326 n, m (%/pt-yr)	Freedom-from Event (SE) at 7 Years[e]
All Cause Mortality	8, 8 (0.9%)	170, 170 (3.9%)	72.7 (2.1)
Trial Valve Related Mortality	4, 4 (0.5%)	37, 37 (0.9%)	92.8 (1.3)

Endpoint	Early (≤30 POD) N =885 n, m (%)	Late (>30 POD) Late pt-yrs =4326 n, m (%/pt-yr)	Freedom-from Event (SE) at 7 Years[e]
Re-Intervention / Reoperation	2, 2 (0.2%)	26, 27 (0.6%)	95.7 (0.9)
Explant	1, 1 (0.1%)	13, 13 (0.3%)	97.8 (0.7)
Thromboembolism	30, 30 (3.4%)	72, 79 (1.8%)	85.2 (1.7)
Stroke	23, 23 (2.6%)	45, 49 (1.1%)	90.3 (1.3)
TIA	7, 7 (0.8%)	28, 29 (0.7%)	94.0 (1.2)
Non-cerebral Embolism	0, 0 (0.0)	1, 1 (0.0)	99.9 (0.1)
Valve Thrombosis	0, 0 (0.0)	2, 2 (0.0)	99.6 (0.3)
All Bleeding [a]	16, 16 (1.8%)	148, 202 (4.7%)	77.0 (1.9)
Major Bleeding	10, 10 (1.1%)	84, 105 (2.4%)	87.2 (1.4)
Endocarditis	0, 0 (0.0)	6, 6 (0.1%)	99.2 (0.3)
All Paravalvular Leak (PVL)	10, 10 (1.1%)	21, 21 (0.5%)	96.3 (0.7)
Major PVL [b]	2, 2 (0.2%)	12, 12 (0.3%)	98.3 (0.5)
Non-structural Valve Dysfunction (non-PVL) [c]	2, 2 (0.2%)	6, 6 (0.1%)	99.2 (0.3)
Valve Migration/Embolization	0, 0 (0.0)	0, 0 (0.0)	100.0 (0.0)
Valve Malposition	2, 2 (0.2%)	2, 2 (0.0)	99.5 (0.3)
Valve Instability	2, 2 (0.2%)	2, 2 (0.0)	99.5 (0.3)
Valve Dislodgement	0, 0 (0.0)	0, 0 (0.0)	100.0 (0.0)
Valve Stenosis	0, 0 (0.0)	3, 3 (0.1)	99.9 (0.1)
Hemolysis	0, 0 (0.0)	8, 8 (0.2%)	99.0 (0.3)
Structural Valve Deterioration	0, 0 (0.0)	16, 16 (0.4%)	97.5 (0.8)
Device-related New or Worsening Conduction Disturbance [a]	9, 9 (1.0%)	15, 16 (0.4%)	95.9 (0.9)
Requiring Pacemaker Implant [d]	7, 7 (0.8%)	3, 3 (0.1%)	98.6 (0.5)
Not Requiring Pacemaker Implant	2, 2 (0.2%)	13, 13 (0.3%)	97.0 (0.9)
Site Pacemaker Implant [d]	120, 120 (14.5%)	65, 65 (1.6%)	75.8 (1.6)

'n' is the number of subjects with the event; 'm' is the number of events; LPY: late pt-yrs; early rates are reported as n/N; late linearized rates are reported as m/LPY.

[a] As of December 11, 2017, all bleeding and conduction disturbance events are site-reported. Prior to that amendment, all bleeding and conduction disturbance events were adjudicated by CEC.

[b] Major PVL is PVL of any grade resulting in intervention or considered an SAE.

[c] NSVD (non-PVL) includes any case of valve malposition, migration, or dislodgement reported by the ECL. ECL findings for mild rocking or dehiscence count as both valve malposition and valve instability, but only count once in the overall count of NSVD (non- PVL).

[d] For cardiac conduction disturbance requiring pacemaker implant, N is the number of subjects eligible for the endpoint (829) and the LPY only includes the follow up for subjects eligible for this endpoint (4108).

[e] Based on Kaplan-Meier analysis of time to first occurrence (early or late). Standard Error (SE) based on Greenwood's formula.

Table 5: TRANSFORM NYHA Classification at Baseline, 1 Year, 5 Years and 7 Years

NYHA Class	Baseline NYHA % (n/N)	1 Year NYHA % (n/N[1])	5 Year NYHA % (n/N[1])	7 Year NYHA % (n/N[1])
Class I	15.1% (141/931)	79.6% (648/814)	77.3% (420/543)	75.7% (109/144)
Class II	53.3% (496/931)	17.8% (145/814)	20.1% (109/543)	21.5% (31/144)
Class III	30.0% (279/931)	2.2% (18/814)	2.6% (14/543)	2.8% (4/144)
Class IV	1.6% (15/931)	0.4% (3/814)	0.0% (0/543)	0.0% (0/144)

[1] Percentages are based on the number of subjects who have a post-operative NYHA assessment.

Table 6: TRANSFORM Hemodynamic Parameters

Follow-up Visit	19 mm n: Mean ± SD	21 mm n: Mean ± SD	23 mm n: Mean ± SD	25 mm n: Mean ± SD	27 mm n: Mean ± SD	Total n: Mean ± SD
EOA (cm^2)						
1 YEAR	43: 1.1 ± 0.1	161: 1.4 ± 0.1	256: 1.7 ± 0.2	214: 1.9 ± 0.2	92: 2.2 ± 0.2	766: 1.7 ± 0.3
5 YEARS	26: 1.2 ± 0.1	90: 1.4 ± 0.2	150: 1.7 ± 0.2	130: 1.8 ± 0.2	58: 2.1 ± 0.3	454: 1.7 ± 0.3
7 YEARS	9: 1.2 ± 0.1	23: 1.4 ± 0.1	32: 1.6 ± 0.3	27: 1.8 ± 0.3	4: 2.1 ± 0.1	95: 1.6 ± 0.3
Mean gradient (mmHg)						
1 YEAR	43: 13.9 ± 4.0	163: 11.3 ± 3.6	265: 10.0 ± 3.2	220: 9.3 ± 3.0	96: 8.1 ± 3.3	787: 10.0 ± 3.6
5 YEARS	27: 12.4 ± 3.5	93: 10.7 ± 3.9	153: 10.0 ± 5.6	142: 9.8 ± 6.5	64: 7.9 ± 4.4	479: 9.9 ± 5.5
7 YEARS	9: 12.1 ± 4.0	24: 10.8 ± 3.1	33: 12.8 ± 7.4	29: 9.8 ± 4.0	6: 7.7 ± 1.8	101: 11.1 ± 5.3

n is the number of subjects with data at the specific visit.

Table 7: TRITON Trial Study Demographics

Factor	ALL SUBJECTS
Age at Implant	**N: Mean ± SD (Min-Max)**
Age (years)	287: 75.3 ± 6.7 (44.0-92.0)
Sex	**% (n/N)**
Female	49.1% (141/287)
Male	50.9% (146/287)
NYHA Classification	**% (n/N)**
Class I	4.9% (14/283)
Class II	41.7% (118/283)
Class III	50.2% (142/283)
Class IV	3.2% (9/283)
Risk Scores	**N: Mean ± SD (Min-Max)**
Logistic EuroSCORE (%)	283: 8.4 ± 6.7 (1.2-50.7)

N is the number of subjects with available data for the given parameter.

NYHA classification and logistic EuroSCORE unavailable for 4 subjects.

Table 8: TRITON Observed Adverse Events

Endpoint	Early (≤30 POD) N =287 n, m (%)	Late (>30 POD) Late pt-yrs =1206 n, m (%/pt-yr)	Freedom-from Event (SE) at 1 Year
Mortality	5, 5 (1.7%)	46, 46 (3.8%)	0.954 (0.012)
Valve Related Mortality	3, 3 (1.0%)	5, 5 (0.4%)	0.982 (0.008)
Re-Intervention / Reoperation	4, 4 (1.4%)	6, 6 (0.5%)	0.975 (0.009)
Explant	4, 4 (1.4%)	6, 6 (0.5%)	0.975 (0.009)
Thromboembolism	13, 13 (4.5%)	21, 23 (1.9%)	0.936 (0.15)
Valve Thrombosis	0, 0 (0.0)	0, 0 (0.0)	1.000 (0.000)
All Bleeding	25, 29 (8.7%)	29, 39 (3.2%)	0.880 (0.019)
Major Bleeding	21, 22 (7.3%)	17, 25 (2.1%)	0.901 (0.018)
Endocarditis	0, 0 (0.0)	4, 4 (0.3%)	0.996 (0.004)
All Paravalvular Leak (PVL)	3, 3 (1.0%)	7, 7 (0.6%)	0.968 (0.011)
Major PVL	2, 2 (0.7%)	4, 4 (0.3%)	0.982 (0.008)
Hemolysis	2, 2 (0.7%)	2, 2 (0.2%)	0.989 (0.006)
Structural Valve Deterioration	0, 0 (0.0)	6, 6 (0.5%)	1.000 (0.000)

'n' is the number of subjects with the event; 'm' is the number of events; LPY: late pt-yrs. Early rates are reported as n/N; late linearized rates are reported as m/LPY

Freedom from event based on Kaplan Meier analysis of time to first occurrence (early or late). Standard Error (SE) based on Greenwood's formula.

Table 9: TRITON NYHA Classification at Baseline, 1 Year and 5 Years

NYHA Class	Baseline NYHA % (n/N)	1 Year NYHA % (n/N)	5 Year NYHA % (n/N)
Class I	4.9% (14/283)	55.4% (143/258)	42.6% (83/195)
Class II	41.7% (118/283)	38.0% (98/258)	39.5% (77/195)
Class III	50.2% (142/283)	6.6% (17/258)	16.9% (33/195)
Class IV	3.2% (9/283)	0.0% (0/258)	1.0% (2/195)

N represents the number of subjects with known NYHA at the specified visit.

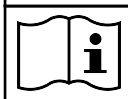
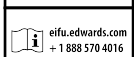
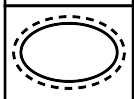
Table 10: TRITON Hemodynamic Parameters

Follow-up Visit	19 mm n: Mean ± SD	21 mm n: Mean ± SD	23 mm n: Mean ± SD	25 mm n: Mean ± SD	27 mm n: Mean ± SD	Total n: Mean ± SD
EOA (cm^2)						
1 YEAR	2: 1.3 ± 0.1	68: 1.6 ± 0.2	72: 1.7 ± 0.2	52: 1.8 ± 0.2	17: 1.9 ± 0.2	211: 1.7 ± 0.2
5 YEARS	3: 1.4 ± 0.1	42: 1.5 ± 0.2	58: 1.7 ± 0.3	37: 1.8 ± 0.2	11: 1.9 ± 0.3	151: 1.7 ± 0.3
Mean gradient (mmHg)						
1 YEAR	5: 17.0 ± 4.2	69: 9.9 ± 3.2	79: 9.0 ± 3.3	60: 8.2 ± 3.1	17: 6.2 ± 1.5	230: 9.0 ± 3.5
5 YEARS	4: 18.7 ± 4.2	43: 10.8 ± 5.6	60: 10.4 ± 5.5	42: 8.4 ± 3.1	12: 6.9 ± 2.8	161: 9.9 ± 5.1

Table 11: PPI Rates

Study / Device	Patient Population	PPI Rate
TRANSFORM	All-cause PPI, all patients	12.3% (Ref. 11)
	All-cause PPI, all patients without baseline conduction abnormalities	6.6% (Ref. 11)
TRITON	All subjects <30 days	6.9% (Ref. 12)
Rapid Deployment Valves	Various literature reported	1.7% - 28.6% (Ref. 13)
Surgical Aortic Valves	Various literature reported	3% - 11% (Ref. 11)

Symbol Legend

	English
	Model Number
	Do not re-use
	Caution
	Consult instructions for use
	Consult instructions for use on the website
	Do not use if package is damaged and consult instructions for use
	Temperature limit
	Sterilized using liquid chemical
	Sterilized using irradiation
	Store in a cool, dry place
	Use product if indication is shown
	Single sterile barrier system with protective packaging outside

	English
	Double sterile barrier system
	Quantity
	Use-by date
	Serial Number
	Unique Device Identifier
	Size
	Manufacturer
	Date of manufacture
	Lot Number
	Do not use product if indication is shown
	MR Conditional

	English
	Non-pyrogenic
	Medical device
	Contains biological material of animal origin
	Contains hazardous substances
	Contents
	Conformité Européenne (CE Mark)
Rx only	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.
	Authorized representative in the European Community/ European Union
	Importer

EC REP

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