INSTRUCTIONS FOR USE

DEVICE DESCRIPTION

The Symphony® Thrombectomy System is comprised of several devices:

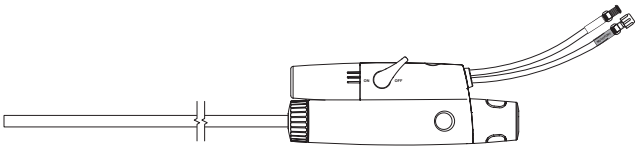
- 24F Symphony Catheter
- 24F Symphony Standard Dilator
- 24F Symphony Advance® Long Dilator
- 24F Symphony ProHelix®
- 16F Symphony Catheter
- 16F Symphony Dilator
- 16F Symphony ProHelix®
- Symphony Clot Container
- Imperative Care® Pump
- Vascular Canister
- Vascular Tubeset



Advance Long Dilator (24F)



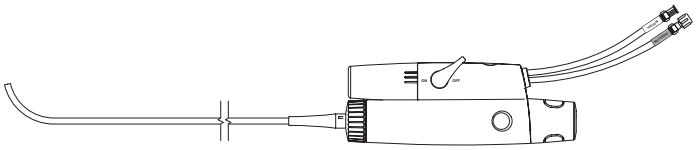
Dilator 16F / 24F



24F Symphony Catheter



ProHelix 16F / 24F



16F Symphony Catheter

FIGURE 1: SYMPHONY THROMBECTOMY SYSTEM COMPONENTS

The Symphony Thrombectomy System is designed to remove thrombus/embolus (hereupon referred to as 'thrombus' or 'clot') from the vasculature using controlled aspiration. The Symphony Catheter targets aspiration from the Imperative Care Pump* directly to the thrombus. The Symphony ProHelix may be used to facilitate aspiration and removal of the thrombus through the Symphony Catheter.

The Symphony Catheter has a lubricious hydrophilic coating on the distal 40 cm of the 24F catheter shaft, and distal 55 cm of the 16F catheter shaft. The Symphony Catheter and Symphony Dilator are introduced through a vascular access (introducer) sheath into the peripheral vasculature and guided over a guidewire to the site of the thrombus. The Symphony Catheter is used with the Imperative Care Pump, connected using the Vascular Tubeset and the Vascular Canister, to aspirate thrombus.

As needed, the Symphony ProHelix may be introduced through the Symphony Catheter to assist with thrombus removal. The Symphony ProHelix is manually advanced through the Symphony Catheter, remaining inside the Symphony Catheter during the procedure. During aspiration, the handle on the proximal end of the Symphony ProHelix is manually rotated, which rotates the tip of the Symphony ProHelix to facilitate thrombus removal through the Symphony Catheter. The tips of the devices are visible under fluoroscopy.

INDICATION FOR USE

The Symphony Thrombectomy System is intended for:

- The non-surgical removal of fresh, soft emboli and thrombi from blood vessels.
- Injection, infusion, and/or aspiration of contrast media and other fluids into or from a blood vessel.

The Symphony Thrombectomy System is intended for use in the peripheral vasculature and for the treatment of pulmonary embolism.

*The TRUVIC Generator can be used as the vacuum source as it can achieve the required pump pressure-flow performance curve.

WARNINGS

The Symphony Thrombectomy System should only be used by physicians who have received appropriate training in interventional techniques.

Do not advance, retract, or use any component of the Symphony Thrombectomy System against resistance without careful assessment of the cause using fluoroscopy. If the cause cannot be determined, withdraw the device or system as a unit. Torquing, forced insertion, or withdrawal of the Symphony Catheter or Symphony ProHelix against resistance may result in damage to the device or vessel; do not rotate the devices against resistance more than 1 revolution.

Do not retract the Symphony ProHelix through the Hemostasis Valve on the Symphony Catheter unless the Hemostasis Valve is opened sufficiently to allow passage. Failing to actuate the Hemostasis Valve buttons while inserting or withdrawing a device through the Hemostasis Valve may damage the valve or the device.

Verify aspiration pump is appropriate before use.

The Symphony Thrombectomy Catheters have been verified for use with the Vascular Tubeset and Imperative Care Pump. The Imperative Care Pump is capable of delivering vacuum pressures between -20 inHg and -29.9 inHg during use and is characterized by the pressure-flow performance curve presented in Figure 2. If using a vacuum pump other than the Imperative Care Pump, carefully review the vacuum pump performance parameters to ensure it can achieve the same operating vacuum pressures between -20 inHg and -29.9 inHg and corresponds to the same flow rate ranges (Figure 2).

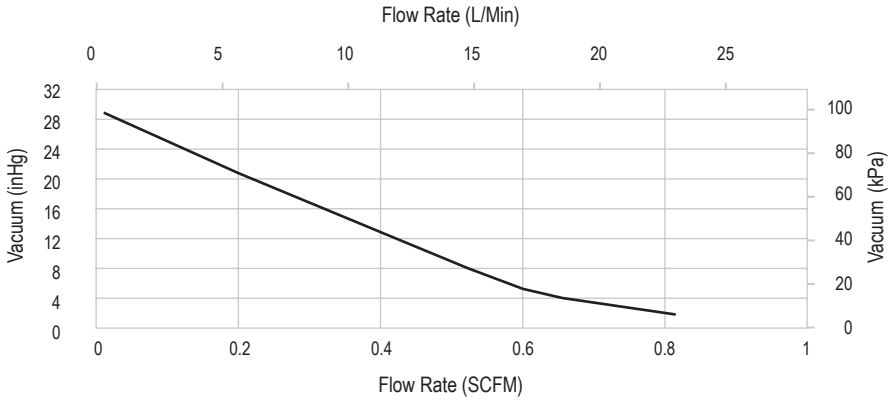


FIGURE 2: PUMP PRESSURE-FLOW PERFORMANCE CURVE FOR THE IMPERATIVE CARE PUMP

PRECAUTIONS

- This device is intended for single-use only. Do not resterilize or reuse. Resterilization and/or reuse may result in ineffective catheter coating lubrication, which may result in high friction and the inability to access the target vasculature location.
- Do not use kinked or damaged devices. Do not use open or damaged packages.
- Use prior to the “Use By” date.
- Use the Symphony Thrombectomy System in conjunction with fluoroscopic visualization.
- Do not use automated high-pressure contrast injection equipment with the Symphony Catheter.
- In order to minimize blood loss, ensure that the Symphony Catheter handle vacuum lever is in the “ON” position for the minimum time needed to remove thrombus.
- If repositioning of the Symphony Catheter is necessary during the revascularization procedure, such repositioning should be performed over an appropriate guidewire and the Symphony Dilator as needed, using standard catheter and guidewire techniques.

POTENTIAL ADVERSE EVENTS

Possible complications include, but are not limited to, the following:

- Acute occlusion
- Amputation of an extremity
- Anemia
- Angina
- Arrhythmia, including ventricular fibrillation
- Bradycardia
- Cardiac injury
- Cardiac tamponade
- Cardiogenic shock
- Cardio-respiratory arrest

- Compartment syndrome
- Death
- Embolism (air, thrombus, foreign body)
- Fever
- Fistula
- Hematoma
- Hemolysis
- Hemoptysis
- Hemorrhage or excessive blood loss (including retroperitoneal hemorrhage)
- Hypertension
- Hypotension
- Hypoxemia
- Infarction/Necrosis
- Infection (access site, respiratory tract, etc.)
- Inflammatory or allergic reactions and anaphylaxis from contrast media or device
- Ischemia
- Myocardial infarction
- Nerve damage
- Neurological deficits, including stroke
- Occlusion of target vasculature
- Perforation of the pulmonary arteries
- Pericardial effusion
- Pleural effusion
- Pneumonia
- Pneumothorax
- Pseudoaneurysm
- Pulmonary edema
- Pulmonary infarction
- Pulmonary injury
- Renal insufficiency/ failure
- Respiratory failure
- Right bundle branch block
- Sepsis
- Suboptimal revascularization
- Tachycardia
- Thrombocytopenia
- Thrombosis
- Valvular disruption/injury
- Vasovagal reaction
- Ventricular rupture
- Vessel injury
- Vessel spasm

PROCEDURE AND PREPARATION

1. Refer to **Warnings, Precautions, and Potential Adverse Events** prior to use.
2. Prepare and place an introducer sheath according to the manufacturer's Instructions for Use.
3. Prior to introducing the Symphony System, ensure an appropriate 0.035" guidewire is placed into the target vessel. When using the 24F with the Standard Dilator, a guidewire of at least 260 cm length should be used. When using the 24F Advance Long Dilator or the Symphony 16F Catheter, a guidewire of at least 300 cm length should be used.

24F OR 16F SYMPHONY SYSTEM PREPARATION AND USE

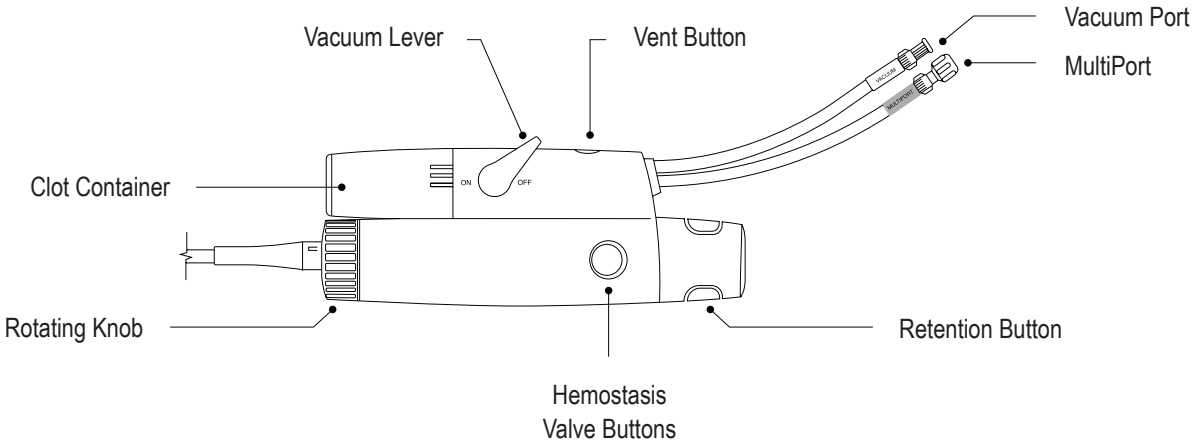


FIGURE 3: SYMPHONY CATHETER HANDLE, LABELED

1. As each device of the Symphony Thrombectomy System is used, remove the device from the packaging, and inspect for damage or for kinks.
2. Remove the Hemostasis Valve clip.

3. Flush the lumens of the Symphony Catheter and Dilator with heparinized saline and prepare the Vascular Tubeset and Canister according to their respective IFUs. To flush the Symphony Catheter, confirm that the Vacuum Lever is in the “OFF” position, add a stopcock to the Handle injection port labelled “MultiPort”, and flush saline through the Handle injection port until saline flows from the tip of the Symphony Catheter.
4. Hydrate the outer surfaces of the Symphony Catheter and Dilator shafts.
5. Press the Hemostasis buttons to open the Hemostasis Valve and insert the Dilator through the open Hemostasis Valve of the Handle. Advance the Dilator through the Catheter until Dilator hub snaps into the Retention Clip of the Handle.
6. If desired, attach a manifold or syringe to the stopcock on the end of the Handle tubing labelled “MultiPort”.
7. Insert the Dilator and Catheter over the previously placed 0.035” guidewire into the introducer sheath.
8. Advance the Symphony System until the tip of the Dilator is in the desired position in the selected vessel.
9. Connect the Primary Tubing to the Handle tubing labelled “Vacuum”.
10. Attach the other end of the Primary Tubing to the Vascular Canister and ensure the stopcock on the Tubing is closed to the Pump.
11. Release the Dilator by pressing the Retention Clip buttons on the Handle.
    a. When using a 24F Symphony System:
        i. With the Standard Dilator, withdraw the Dilator approximately 1 cm then press the Hemostasis Valve buttons on the Handle to reduce friction and completely withdraw the Dilator while maintaining the Catheter and guidewire position.
        ii. With the Advance Long Dilator, hold the dilator and guide wire in position and advance the catheter approximately 1 cm. Then press the Hemostasis Valve buttons on the Handle to reduce friction and advance the Catheter over the Dilator to the desired location. While pressing the Hemostasis Valve buttons, completely withdraw the Dilator and maintain the Catheter and guidewire position.
    b. When using a 16F Symphony System, withdraw the Dilator approximately 1 cm then press the Hemostasis Valve buttons on the Handle to reduce friction and completely withdraw the dilator while maintaining the Catheter and guidewire position.
12. Confirm the Handle vacuum lever is in the “OFF” position and open the stopcock on the Tubing.
13. Ensure the Pump is on and the Pump gauge reads -20 inHg or greater vacuum (refer to Imperative Care Pump IFU).
14. Confirm tip of the Symphony Catheter is in the desired location.
15. To begin aspiration, move the vacuum lever on the Handle to the “ON” position.
16. When unrestricted blood flow through the clot container and into the canister is observed, move the lever on the Handle to the “OFF” position.
17. If desired, thrombus in the Symphony clot container can be removed by pressing and holding the vent button, rotating the clot container to unlocked position, pulling away from the Handle, and emptying the thrombus from the container. Alternatively, a replacement clot container can be used. Verify integrity before replacing the clot container on the Handle, then reconnect the container and rotate to the locked position.
18. If aspiration in another location is desired, reposition the tip of the Catheter using the Dilator, as necessary.
19. Confirm clot removal by briefly pressing the Vent Button to evacuate blood and visualize the clot in the container of the Handle.

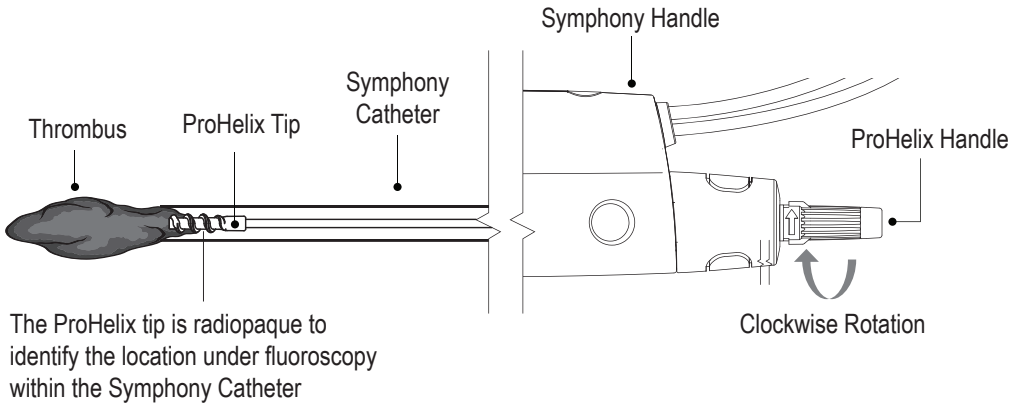


FIGURE 4: PROHELIX ENGAGED WITH THROMBUS

20. To resolve thrombus obstructing the Catheter tip, prepare and use the compatible Symphony ProHelix.
    a. Verify integrity of the ProHelix and flush the lumen with heparinized saline.

b. Introduce the ProHelix over the previously placed 0.035" guidewire and through the Hemostasis Valve of the Handle until the handle of the ProHelix snaps into the Retention Clip of the Handle.

c. To begin aspiration, move the vacuum lever on the Handle to the "ON" position.

d. Slowly rotate the ProHelix handle as indicated by the arrow (clockwise direction). Upon feeling resistance to rotation, slowly retract the spring- loaded ProHelix handle up to 1 cm while rotating to assist with aspiration and removal of the thrombus.

e. If there is unrestricted blood flow, turn off aspiration by switching the vacuum lever on the Handle to the "OFF" position.

f. Confirm clot removal by briefly pressing the Vent Button to evacuate blood and visualize the clot in the container of the Handle.

g. If thrombus is not aspirated, reposition the Catheter and attempt aspiration again (starting with step 20c above).

h. When aspiration is complete, depress the Retention Clip buttons on the Handle and withdraw the ProHelix approximately 1 cm from the Catheter. Then press the Hemostasis Valve buttons on the Handle to reduce friction while withdrawing the ProHelix from the Catheter completely. Ensure the Hemostasis Valve buttons are completely depressed when pulling the ProHelix tip through the Valve.

21. To remove any thrombus that may remain in catheter, momentarily turn on aspiration by switching the vacuum lever to the "ON" position and ensure there is unrestricted blood flow into the clot container of the Handle.
22. If clot removal is complete, turn off the Pump. To obtain a post-treatment angiogram, inject contrast media and saline through the tubing labelled "MultiPort"on the Handle.
23. If repositioning the device for removal of additional thrombus in a different location is desired, flush and insert the Dilator over the previously placed guidewire, re-position, and return to step 11.
    a. Always confirm the integrity of the ProHelix and ensure the tip is clear of residual thrombus before use.
24. Remove the Symphony Thrombectomy System and flush all Symphony components prior to reintroducing the System during the procedure.
25. If reintroducing the Catheter with ProHelix, flush the Catheter and check the ProHelix tip for thrombus by visually inspecting the ProHelix tip.
    a. Rotate the handle of the ProHelix to align the safety wings with the open channels on the proximal end of the Catheter Handle.
    b. Press the Retention Clip buttons on the proximal end of the Catheter Handle and advance the ProHelix into the cleaning position.
    c. Remove any thrombus attached to the ProHelix tip.
    d. Press the retention clip buttons and withdraw ProHelix until the entire ProHelix handle is visible.
    e. Advance ProHelix until the handle of the ProHelix snaps into the retention clip of the Catheter Handle.
26. If reintroducing the Catheter without the ProHelix, depress the Retention Clip buttons on the Handle, remove the ProHelix from the catheter, and flush the Catheter. During ProHelix movement, press the Hemostasis Valve buttons on the Handle to reduce friction.

TELESCOPING THE 16F SYMPHONY CATHETER THROUGH PREVIOUSLY PLACED 24F SYMPHONY CATHETER

1. Remove the Hemostasis Valve clip.
2. Flush the lumens of the Symphony Catheter and Dilator with heparinized saline. To flush the Symphony Catheter, confirm that the Vacuum Lever is in the "OFF" position, add a stopcock to the Handle injection port labelled "MultiPort" and flush saline through the Handle injection port until saline flows from the tip of the Symphony Catheter.
3. Hydrate the outer surfaces of the 16F Symphony Catheter and Dilator shafts.
4. Press the Hemostasis buttons to open the Hemostasis Valve and insert the 16F Symphony Dilator through the open Hemostasis Valve of the 16F Symphony Handle and advance through the Catheter until Dilator hub snaps into the Retention Clip of the Handle.
5. Insert a 0.035" guidewire at least 300 cm long into the Dilator with the guidewire tip retained within the Dilator.
6. If desired, attach a manifold or syringe to the stopcock on the end of the Handle tubing labelled "MultiPort".
7. Press the Hemostasis buttons to open the Hemostasis Valve on the 24F Catheter Handle and advance the 16F System through the 24F Handle, until the Catheter tips are aligned under fluoroscopy.
    a. Note that the external markers on the 16F Catheter shaft provide an early indicator of approaching alignment of the 16F Catheter tip with the tip of the 24F Catheter.
    b. Alignment of the 16F Catheter tip with the tip of the 24F Catheter can be confirmed using fluoroscopic viewing of the radiopaque tip markers of the Catheters.

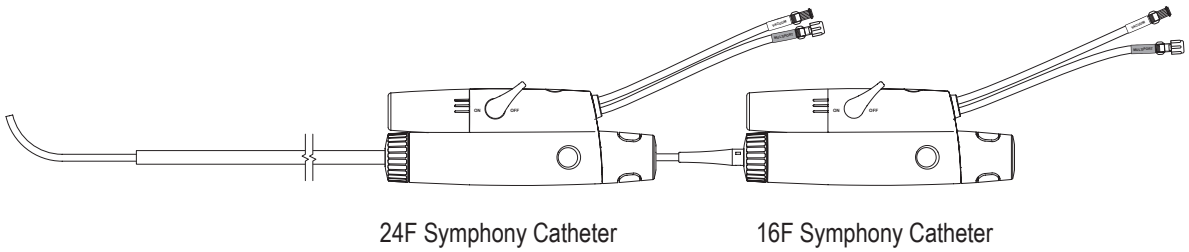


FIGURE 5: TELESCOPING A 16F SYMPHONY CATHETER INTO A 24F SYMPHONY CATHETER

8. Extend the guidewire to the desired position to enable the 16F System to reach the target location.
9. Advance the 16F System over the guidewire to the target location.
10. Connect one end of the Secondary Tubing to the 16F Handle tubing labelled “Vacuum”.
11. Attach the other end of the Secondary Tubing to the existing four-way stopcock on the Primary Tubing and ensure the stopcock is closed to the Pump.

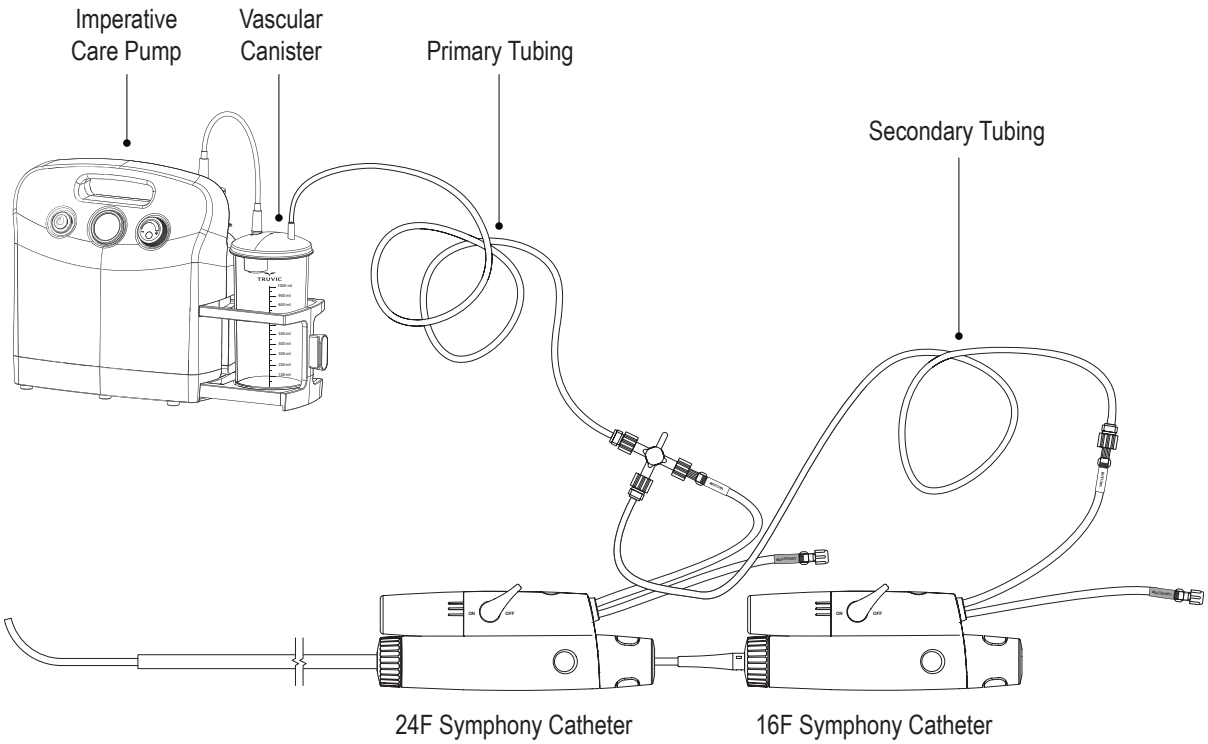


FIGURE 6: USE OF VASCULAR TUBESET FROM TELESCOPING 16F SYMPHONY CATHETER AND 24F SYMPHONY CATHETER TO IMPERATIVE CARE PUMP AND CANISTER

12. Release the Dilator by pressing the Retention Clip buttons on the 16F Handle and withdraw the Dilator while maintaining the Catheter and guidewire positions. During Dilator movement, press the Hemostasis Valve buttons on the Handle to reduce friction.
13. Confirm that both the 24F and 16F Handle vacuum levers are in the “OFF” position.
14. Turn on the Pump and ensure that the Pump gauge reads -20 inHg or greater vacuum (refer to Imperative Care Pump IFU).
15. Open the stopcock on the Vascular Tubeset to allow vacuum to both the 24F and 16F Systems and ensure no leaks are detected.
16. Confirm tip of the 16F Symphony Catheter is in the desired location under fluoroscopy.
17. To begin aspiration, move the vacuum lever on the 16F Handle to the “ON” position.
18. When unrestricted blood flow through the clot container and into the canister is observed, move the lever on the 16F Handle to the “OFF” position.

19. If desired, thrombus in the Symphony clot container can be removed by pressing and holding the vent button, rotating the clot container to unlocked position,pulling away from the Handle, and emptying the thrombus from the container. Alternatively, a replacement clot container can be used. Verify integrity before replacing the clot container on the Handle, then reconnect the container and rotate to the locked position.
20. If aspiration in another location is desired, reposition the tip of the Catheter using the Dilator, as necessary.
21. Confirm clot removal by briefly pressing the Vent Button to evacuate blood and visualizing the clot in the container of the 16F Handle.
22. To resolve thrombus obstructing the Catheter tip, prepare and use the 16F Symphony ProHelix.
    a. Verify integrity of the ProHelix and flush the lumen with heparinized saline.
    b. Introduce the ProHelix over the previously placed 0.035" guidewire and through the Hemostasis Valve of the 16F Symphony Handle until the handle of the ProHelix snaps into the retention clip of the 16F Handle.
    c. Withdraw the tip of the guidewire completely into the ProHelix tip using fluoroscopic guidance.
    d. To begin aspiration, move the vacuum lever on the 16F Handle to the "ON" position.
    e. Slowly rotate the ProHelix as indicated by the arrow (clockwise direction).Upon feeling resistance to rotation, slowly retract the spring-loaded ProHelix handle up to 1 cm while rotating to assist with aspiration and removal of the thrombus.
    f. If there is unrestricted blood flow and thrombus is aspirated, turn off aspiration by switching the lever on the 16F Handle to the "OFF" position.
    g. If blood flow is restricted, leave vacuum lever in the "ON" position and retract the 16F Catheter into the 24F Catheter until the tips align under fluoroscopic observation.

       Note that the external markers on the 16F Catheter shaft provide an early indicator of approaching alignment of the 16F Catheter tip with the tip of the 24F Catheter.
    h. Move the vacuum lever on the 24F Handle to the "ON" position and gently withdraw the 16F Catheter tip into the 24F Catheter.
    i. Continue withdrawing the 16F Catheter until the distal tip is visible through the transparent proximal shaft of the 24F Catheter. Move the vacuum lever on the 24F Handle to the "OFF" position. Open the Hemostasis Valve on the 24F Handle and gently remove the 16F System from the 24F Catheter and release the Hemostasis Valve buttons on the 24F Handle.
    j. Turn off the vacuum to the 16F Catheter by moving the vacuum lever to the"OFF" position.
23. Ensure there is no thrombus remaining in the 24F Catheter by moving the vacuum lever to the "ON" position and visualizing unrestricted blood flow through the clot container.
24. If reintroducing the 16F Catheter with 16F ProHelix, flush the Catheter and check the ProHelix tip for thrombus by visually inspecting the ProHelix tip.
    a. Rotate the handle of the ProHelix to align the safety wings with the open channels on the proximal end of the 16F Handle.
    b. Press the Retention Clip buttons on the proximal end of the 16F Handle and advance the ProHelix into the cleaning position.
    c. Remove any thrombus attached to the ProHelix tip.
    d. Press the retention clip buttons and withdraw ProHelix until the entire ProHelix handle is visible.
    e. Advance ProHelix until the handle of the ProHelix snaps into the retention clip of the 16F Handle.
25. If reintroducing the 16F Catheter without the 16F ProHelix, depress the Retention Clip buttons on the 16F Handle, remove the ProHelix from the Catheter, and flush the 16F Catheter. During ProHelix movement, press the Hemostasis Valve buttons on the Handle to reduce friction.
26. To obtain a post-treatment angiogram, inject contrast media and saline through the MultiPort of the 24F Handle.
27. Remove the Symphony Thrombectomy System and flush all Symphony components prior to reintroducing the System during the procedure.

CLINICAL DATA SUMMARY

The Symphony Thrombectomy System was studied in the SYMPHONY-PE Study, a prospective, multicenter, single-arm, open label study designed to evaluate the safety and effectiveness of the Symphony Thrombectomy System in the treatment of patients diagnosed with acute pulmonary embolism (PE).

A total of 109 subjects were enrolled across 17 clinical sites in the United States and underwent aspiration thrombectomy with the Symphony Thrombectomy System. Further details on this study can be accessed at ClinicalTrials.gov using the identifier NCT06062329.

RECONCILIATION OF EVALUABLE SUBJECTS

	Intervention/ Treatment	48-Hour Assessment	Discharge Assessment	30-Day Assessment	Total Withdrawal, LTF, and Deaths
Eligible for Visit	109	109	109	109	
Withdrawal	0	0	0	1	1
Lost to Follow-Up (LTF)	0	0	0	2	2
Death	0	0	0	0	0
Final Reconciliation	**109**	**109**	**109**	**106**	**3**

SYMPHONY-PE TRIAL ASPIRATION THROMBECTOMY PROCEDURE

Surgical preparation, vascular access, and vascular closure was performed per the local standard of care. The physician measured the pulmonary artery pressure (PAP) prior to starting the thrombectomy via standard of care right heart catheterization to confirm eligibility criteria. The PAP was also measured with the Symphony Thrombectomy System before and after completing the thrombectomy procedure with the study device.

Mechanical thrombectomy was undertaken using the Symphony Thrombectomy System following the use steps described in the product instructions for use, and consistent with standard large bore thrombectomy techniques to reduce the clot burden to an acceptable level. The specific combination of devices and device sizes used in the procedure was left to the operator's discretion. The thrombectomy procedure continued until, in the opinion of the operator, satisfactory reduction of clot burden was achieved, was unachievable, or it was otherwise appropriate to halt the procedure.

The subjects received hospital/medical care after thrombectomy per local standard of care. Of the 110 subjects who provided informed consent, 109 were site-assessed as meeting all study inclusion and exclusion criteria, underwent the procedure, and were enrolled in the study (ITT cohort). A subset of 106 subjects from the full ITT cohort, in whom the study device was the only thrombectomy device used to treat the index PE and who did not require thrombolytics or other devices within 48 hours of the procedure, comprised the mITT cohort.

INCLUSION CRITERIA

1. CTA evidence of acute PE within ≤14 days
2. Clinical signs and symptoms consistent with acute PE.
3. Systolic BP ≥90 mmHg with evidence of dilated RV with an RV/LV ratio >0.9 (based on Investigator's assessment of RV/LV ratio)
4. Stable heart rate <130 BPM prior to procedure
5. Subject is between 18 and 80 years of age
6. Subject is willing to sign an IRB-approved informed consent form
7. Subject is willing and able to comply with protocol follow-up

EXCLUSION CRITERIA

1. Thrombolytic use within 14 days of baseline CTA
2. International Normalized Ratio (INR) >3
3. Platelets <100,000/µL
4. Kidney dysfunction as confirmed by serum creatinine >1.8 mg/dL or GFR <45 mL/min
5. Hematocrit <28% or hemoglobin <9 g/dL
6. Systolic BP <90 mmHg for 15 min or requirement of inotropic support to maintain systolic BP ≥90 mmHg any time after admission
7. Experienced cardiac arrest
8. Has left bundle branch block
9. Known bleeding diathesis or coagulation disorder
10. Presence of intracardiac lead in the right ventricle or right atrium
11. Presence of intracardiac thrombus
12. Major trauma within the past 14 days
13. Cardiovascular or pulmonary surgery within last 7 days
14. Known serious, uncontrolled sensitivity to radiographic agents
15. Contraindication to anticoagulants, i.e., heparin or alternative

16. Patient on extracorporeal membrane oxygenation ECMO
17. Cancer requiring active chemotherapy
18. Heparin-induced thrombocytopenia (HIT)
19. Pulmonary hypertension with peak pulmonary artery pressure >70 mmHg by right heart catheterization.
20. History of chronic severe pulmonary hypertension, and/or chronic left heart disease with left ventricular ejection fraction ≤30%
21. Life expectancy <90 days as determined by investigator
22. Pregnant or nursing
23. COVID-19 positive at hospital admission
24. Current participation in another investigational study
25. Evidence such as imaging or other that suggests the subject is not appropriate for this procedure (e.g., target vessel size is too small to accommodate 16F or 24F catheters).

KEY BASELINE DEMOGRAPHICS

Characteristic	Summary
Female, % (n/N)	39 (43/109)
Age, years, Median (IQR)	62 (51 - 69)
BMI, kg/m^2, Average ± SD (Min - Max)	35 ± 8 (21 - 69)
Race, % (n/N)	
Asian	1.8 (2/109)
Black or African American	29 (32/109)
White	65 (71/109)
Other/Unknown/Not Reported	3.7 (4/109)
Ethnicity, % (n/N)	
Hispanic or Latino	5.5 (6/109)
Not Hispanic or Latino	91 (99/109)
Unkown/Not Reported	3.7 (4/109)

KEY BASELINE CLINICAL CHARACTERISTICS

Characteristic	Summary
Concomitant DVT, % (n/N)	63 (69/109)
Transferred from Outside Facility, % (n/N)	39 (43/109)
Hours from Arrival to Treatment, Average ± SD (Min – Max)	26.1 ± 51.2 (0.22 - 485.6*)
Hours from baseline CTA to Treatment, Average ± SD (Min – Max)	18.8 ± 16.4 (1.8 – 75.3)
Baseline RV/LV, Average ± SD (Min – Max)	1.52 ± 0.44 (0.80 - 2.98)
Baseline Modified Miller Index, Average ± SD (Min – Max)	24.3 ± 4.2 (9 - 33.5)
Baseline Systolic PAP, mmHg, Average ± SD (Min – Max)	48.3 ± 11.1 (25 - 70)
Baseline Mean PAP, mmHg, Average ± SD (Min – Max)	29.1 ± 7.3 (8 - 46)

*The longest times from arrival at the treating hospital to PE treatment are for subjects that presented to the treating hospital for other conditions/ procedures and developed the index pulmonary embolism while recovering from these other procedures.

RESULTS

Primary and secondary safety endpoints were analyzed using the ITT population (n=109). The primary efficacy endpoint was analyzed using the modified intent to treat (mITT) population, excluding subjects who received thrombolytics or other adjunctive therapies within 48 hours (n=102).

The primary efficacy endpoint was the mean reduction in RV/LV between baseline and 48-hours post-procedure, as assessed by the independent imaging core-lab using CTA. The mean reduction in RV/LV was 0.44 with a lower one-sided 97.5% confidence bound of 0.36 and a p-value <0.001, demonstrating the pre-specified performance goal of >0.20 for the lower confidence bound was met by a wide margin.

PRIMARY EFFICACY ENDPOINT RESULTS

Endpoint	Mean RV/LV Reduction, Mean ± SD	Lower One-Sided 97.5% CI for Mean	Performance Goal for CI	p-value
Primary Analysis Mean Reduction in RV/LV Between Baseline and 48-Hours	0.44 ± 0.42	0.36	>0.20	<0.001

The primary safety endpoint was adjudicated by the Independent Safety Board (ISB) and was the 48-hour Major Adverse Events (MAE) rate, a composite of all-cause major bleeding within 48-hours, device-related death within 48-hours and device-related SAEs within 48-hours (including clinical deterioration, pulmonary vascular injury and cardiac injury).

The observed 48-hour MAE rate was 0.9% (1/109) with an upper one-sided 97.5% confidence bound of 5.7% and a p-value <0.001, demonstrating the pre-specified performance goal of <15.0% for the upper confidence bound was met by a wide margin.

PRIMARY SAFETY ANALYSIS RESULTS

Endpoint	MAE Rate, % (n/N)	Upper One-Sided 97.5% CI	Performance Goal for CI	p-value
Composite 48-Hour MAE Rate	0.9 (1/109)	5.7	<15.0	<0.001

Secondary safety endpoints included mortality which occurred in 0.0% at both 48-hours (0/109) and 30-day follow-up (0/108). The rate of device-related SAEs (clinical deterioration, pulmonary injury, or cardiac injury) was 0.0% (0/109). Symptomatic PE recurrence occurred in 2.8% (3/106) of subjects and was associated with concomitant DVT in all three (3) cases, with DVT identified as the likely source of the recurrent PE in two (2) subjects.

SECONDARY SAFETY ENDPOINTS

Endpoint	Rate, % (n/N)	95% CI
ISB Adjudicated Major Bleeding		
VARC-2 Life Threatening or Disabling Bleed	0.0 (0/109)	<0.1 – 3.3
VARC-2 Major Bleeding	0.9 (1/109)	<0.1 – 5.0
48-Hour Device-Related Mortality	0.0 (0/109)	<0.1 – 3.3
48-Hour Device-Related Clinical Deterioration	0.0 (0/109)	<0.1 – 3.3
48-Hour Device-Related Pulmonary Vascular Injury	0.0 (0/109)	<0.1 – 3.3
48-Hour Device-Related Cardiac Injury	0.0 (0/109)	<0.1 – 3.3
30-Day Pulmonary Embolism Related Mortality	0.0 (0/108)	<0.1 – 3.4
30-Day Pulmonary Embolism Related Mortality	0.0 (0/108)	<0.1 – 3.4
30-Day Device Related Serious Adverse Events	0.0 (0/106)	<0.1 – 3.4
30-Day Symptomatic PE Recurrence	2.8 (3/106)	0.6 – 8.0

In total, 11% (12/109) of subjects experienced at least one serious adverse event through the last completed follow-up.

SERIOUS ADVERSE EVENT DATA

Serious Adverse Event Term	Rate, % (n/N)
Embolism (air, thrombus, foreign body)	3.7 (4/109)
Respiratory failure	1.8 (2/109)
Hemorrhage or excessive blood loss (including retroperitoneal hemorrhage)	1.8 (2/109)
Pulmonary Injury	0.9 (1/109)
Thrombosis	0.9 (1/109)
Pneumonia	0.9 (1/109)
Arrhythmia, including ventricular fibrillation	0.9 (1/109)
Infection (access site, respiratory tract, etc.)	0.9 (1/109)
Other – Fall secondary to osteoarthritis exacerbation and weakness	0.9 (1/109)
Other – Urinary tract infection	0.9 (1/109)
Other – Obstructive renal stone	0.9 (1/109)

SYMPHONY-PE STUDY CONCLUSIONS

All prespecified performance goals were met, demonstrating that aspiration thrombectomy with the Symphony Thrombectomy System is safe and effective for treatment of acute pulmonary embolism.

STORAGE

Store in a cool, dry place.

SYMBOLS GLOSSARY

Symbol	Definition
	Manufacturer
	Lot number
	Use by date
	Attention, see instructions for use
	Model number
	Sterilized using ethylene oxide
	Non-pyrogenic
	Prescription Only: Federal law restricts this device to sale by or on the order of a physician
	Do not use if package is damaged
	Do not resterilize
	Do not re-use

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