

EXHIBIT 11

EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
1. A system for assisting blood circulation of a heart, the system comprising:	Abbott has made, used, sold, offered for sale, and/or imported into the United States and is currently making, using, selling, offering for sale and/or importing into the United States products that infringe one or more claims of the '879 patent (the "'879 Accused Products"). Abbott's '879 Accused Products include, but are not necessarily limited to, Abbott's HeartMate 3 Left Ventricular Assist System (LVAS) system ("HeartMate 3")², and any other Abbott products, either alone or in combination, that operate in a reasonably similar manner. For example, and to the extent that Abbott argues that the preamble is a limitation, HeartMate 3 is a system for assisting the blood circulation of a heart, as recited by claim 1. As shown in the exemplary images below from Abbott's documentation for the HeartMate 3 products, the HeartMate 3 is configured such that when implanted and assembled, it "assumes some or all of the workload of the left ventricle" to assist the heart in circulating blood. Overview The HeartMate 3™ Left Ventricular Assist System (LVAS) is a set of equipment and materials that together comprise a medical device designed to provide therapeutic benefit to those affected with advanced heart failure. In service, the LVAS assumes some or all of the workload of the left ventricle, thereby restoring the patient's systemic perfusion while palliating the underlying pathology. The LVAS features a Left Ventricular Assist Device (LVAD), a blood pump intended for long-term implantation in such patients, an extracorporeal Controller, plus all of the features, controls, attachments, interfaces, power sources, supporting equipment, labeling, and tools required to achieve the desired therapeutic benefit. The HeartMate 3 Left Ventricular Assist System is intended for use inside or outside the hospital, or for transportation of LVAD patients via ground ambulance, airplane, or helicopter.

¹ These allegations are exemplary. Discovery from Abbott has not yet begun, and may uncover additional Abbott products that infringe the '879 patent literally or under the doctrine of equivalents. The Court has also not yet construed any terms from any claims of the '879 patent. Thus, Plaintiff reserves the right to supplement these allegations as the case progresses through discovery and the claim construction process.

² The claim chart herein cites to exemplary evidence regarding Abbott's HeartMate 3 products, as products that infringe the '879 patent.

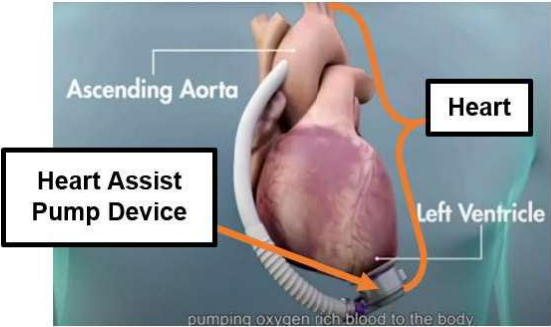
EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	 Exemplary Sources³: “HeartMate 3™ Left Ventricular Assist System Instructions for Use” at pages marked “1-3” – available for download at https://manuals.sjm.com/Search-Form?re=North-America&cc=US&ln=EN&ct=professional&qry=heartmate&ipp=10⁴ via https://manuals.sjm.com/~media/manuals/product-manual-pdfs/5/7/571a1818-2da2-4c1a-b454-f6f5a3bc39b6.pdf. <i>See also</i> the evidence and analysis for the claim elements discussed below.

³ The sources identified herein are merely exemplary.

⁴ All hyperlinks cited herein were last accessed 20 November, 2023.

EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products¹
a heart assist pump device deliverable to the heart and comprising:	Abbott's '879 Accused Products include a heart assist pump device deliverable to the heart. For example, the HeartMate 3 products include a Left Ventricular Assist Device (LVAD), a heart assist pump device configured to be delivered to a patient's heart, as shown in the exemplary annotated⁵ image below:  Exemplary Source: Video titled “HeartMate 3 LVAD Patient Education Program – (2) System Overview,” available at https://www.youtube.com/watch?v=hmmpIKzmKe0. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.
an inflow tube defining a blood inflow path aligned with a central axis;	Abbott's '879 Accused Products include an inflow tube defining a blood inflow path aligned with a central axis. For example, as shown in the annotated image below, HeartMate 3's LVAD heart assist pump device comprises an inflow tube, which Abbott calls an inflow cannula, which defines the blood inflow path from from the left ventricle of a patient's heart. Also, the inflow cannula is aligned with a central axis, as annotated below.

⁵ All annotations in black text boxes herein have been added by Plaintiff, to supplement the existing annotations (if any).

EXHIBIT 11

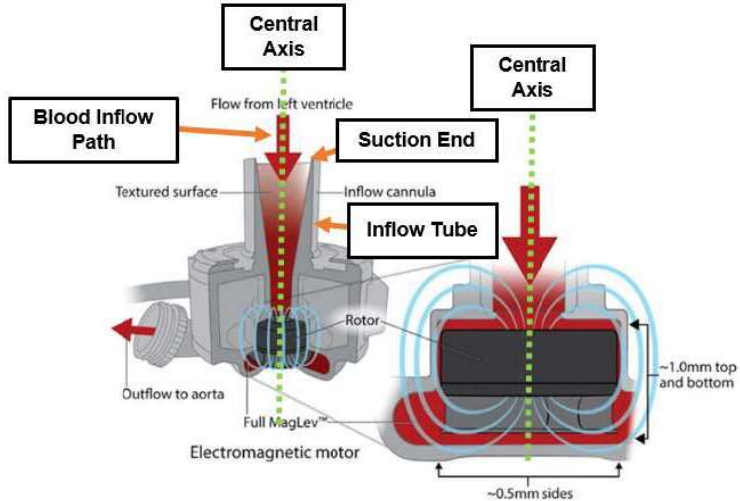
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	 The diagram illustrates the internal components and flow paths of the HeartMate 3 ventricular assist device. Key components labeled include the Central Axis, Blood Inflow Path, Suction End, Inflow Tube, Rotor, Full MagLev™, and Electromagnetic motor. The diagram shows the flow of blood from the left ventricle through the Inflow Tube and Rotor, and the Outflow to the aorta. Dimensions are indicated: ~1.0mm top and bottom, and ~0.5mm sides. Exemplary Source: Figure 1 from “HeartMate 3 in Lowest INTERMACS Profile Cohort: The Swiss Experience,” available at https://www.researchgate.net/publication/317276467_HeartMate_3_in_Lowest_INTERMACS_Profile_Cohort_The_Swiss_Experience. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.

EXHIBIT 11

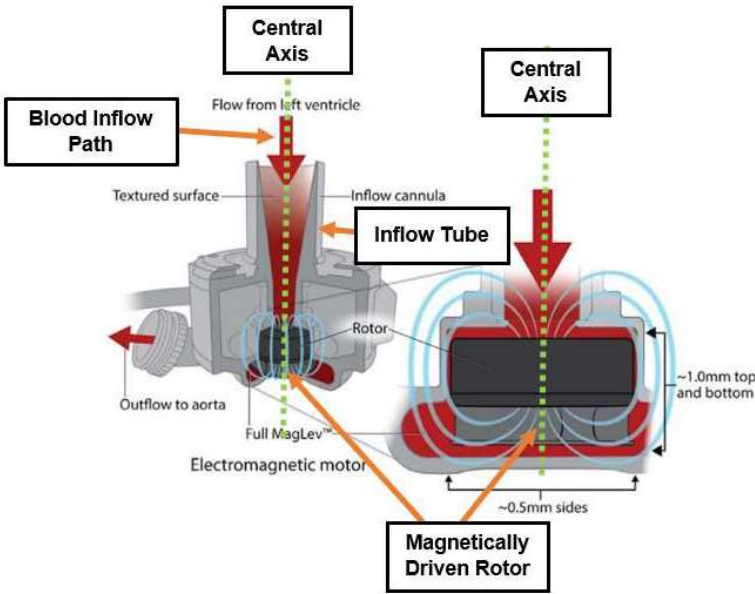
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
a magnetically driven rotor aligned with the central axis and that is rotatable about the central axis within a surrounding rotor housing to drive blood flowing from the inflow tube toward the magnetically driven rotor, the magnetically driven rotor being rigidly coupled and axially adjacent to a first magnetic device within the surrounding rotor housing;	Abbott's '879 Accused Products include a heart assist pump device comprising a magnetically driven rotor aligned with the central axis and that is rotatable about the central axis within a surrounding rotor housing to drive blood flowing from the inflow tube toward the magnetically driven rotor, the magnetically driven rotor being rigidly coupled and axially adjacent to a first magnetic device within the surrounding rotor housing. For example, as shown in the annotated images below, HeartMate 3's LVAD heart assist pump device comprises a magnetically driven rotor aligned with the central axis of the inflow tube, which Abbott calls an inflow cannula.  The diagram illustrates the internal components of a heart assist pump device. It shows a central axis running vertically through the device. Blood flows from the left ventricle into the inflow cannula, which is connected to the inflow tube. The inflow tube has a textured surface. The blood then flows into the rotor, which is driven by a Full MagLev™ Electromagnetic motor. The rotor is aligned with the central axis. The diagram also shows the outflow to the aorta. Dimensions are indicated: ~1.0mm top and bottom for the rotor housing, and ~0.5mm sides for the magnetically driven rotor.

EXHIBIT 11

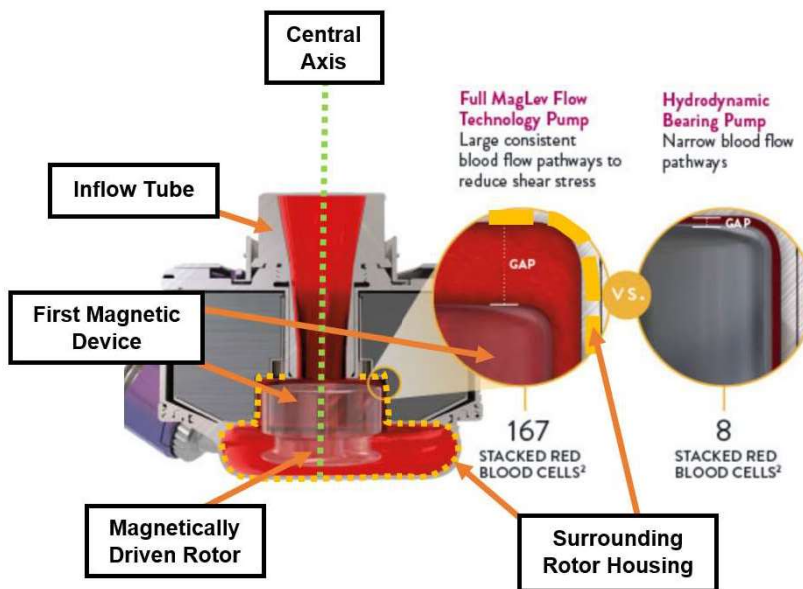
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	Further, the magnetically driven rotor is rotatable within a surrounding rotor housing within the HeartMate 3 LVAD heart assist pump device to act upon blood flowing from the inflow cannula toward the rotor, and is rigidly coupled to a first magnetic device within that surrounding rotor housing.  Exemplary Sources: Figure 1 from “HeartMate 3 in Lowest INTERMACS Profile Cohort: The Swiss Experience,” available at https://www.researchgate.net/publication/317276467_HeartMate_3_in_Lowest_INTERMACS_Profile_Cohort_The_Swiss_Experience; HeartMate 3 Website at https://www.cardiovascular.abbott/us/en/hcp/products/heart-failure/left-ventricular-assist-devices/heartmate-3/about.html. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.

EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products¹
a second magnetic device axially aligned with the central axis and positioned to magnetically drive rotation of the magnetically driven rotor via a magneto coupling with the first magnetic device while both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap sized for passage of the blood during rotation of the magnetically driven rotor; and	Abbott's '879 Accused Products include a second magnetic device axially aligned with the central axis and positioned to magnetically drive rotation of the magnetically driven rotor via a magneto coupling with the first magnetic device while both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap sized for passage of the blood during rotation of the magnetically driven rotor. For example, the HeartMate 3 heart assist pump device includes a second magnetic device which Abbot calls a Motor, Stator, and/or MagLev Flow technology. This second magnetic device is configured to be axially aligned with the central axis of the inflow tube. The second magnetic device is positioned to magnetically drive the magnetically driven rotor to rotate via a magneto coupling with the first magnetic device. Further, the second magnetic device is configured to magnetically drive the magnetically driven rotor to rotate such that, during rotation of the rotor, the rotor and the first magnetically device are entirely spaced apart from the rotor housing by a gap sized for the passage of the blood, as shown in the exemplary annotated images below.

EXHIBIT 11

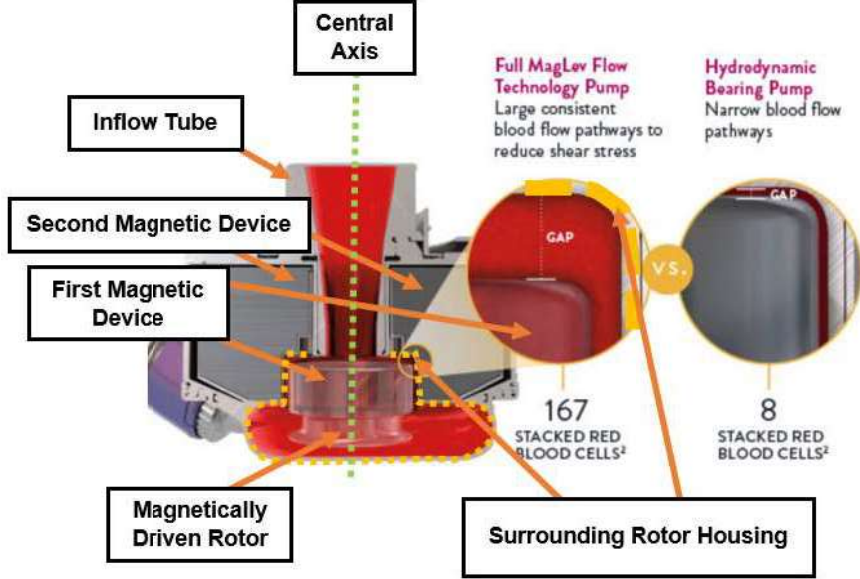
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	 Exemplary Source: HeartMate 3 Website at https://www.cardiovascular.abbott/us/en/hcp/products/heart-failure/left-ventricular-assist-devices/heartmate-3/about.html; <i>see also</i> Video titled “HeartMate 3 LVAD Peer-to-Peer Video Presentation” at https://youtu.be/_C-K-DCINbI. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.
a blood outflow port positioned radially adjacent the magnetically driven rotor such that the blood driven by the magnetically driven rotor exits the surrounding rotor housing in a direction substantially perpendicular to the central axis,	Abbott's '879 Accused Products include a blood outflow port positioned radially adjacent the magnetically driven rotor such that the blood driven by the magnetically driven rotor exits the surrounding rotor housing in a direction substantially perpendicular to the central axis. For example, the HeartMate 3 heart assist pump device includes a port for blood outflow to the aorta, as shown in the annotated image below. This port is radially adjacent to the magnetically driven rotor, such that blood

EXHIBIT 11

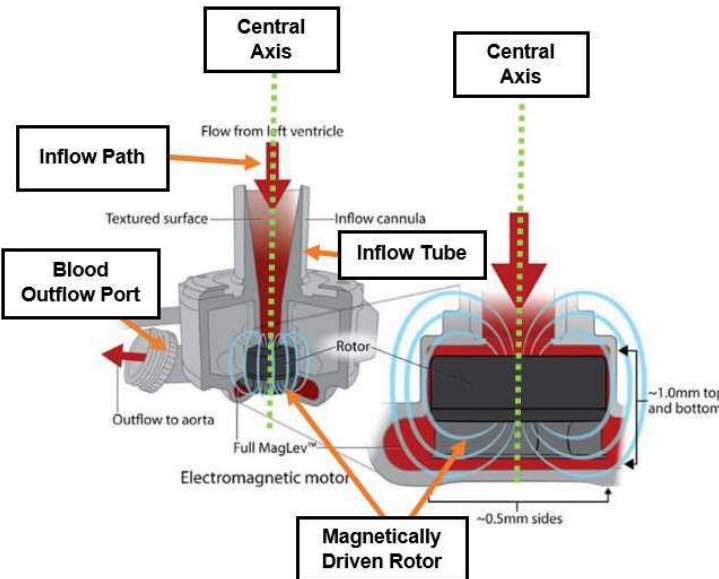
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	driven by the rotor exits the housing through the port in a direction substantially perpendicular to the central axis of the inflow tube, which Abbott calls the inflow cannula.  The diagram illustrates the internal components of the HeartMate 3 ventricular assist device. It shows a cross-section of the device with a central axis running vertically. Blood enters through an inflow cannula at the top, which has a textured surface. The inflow path leads to a rotor assembly. The rotor is driven by a Full MagLev™ electromagnetic motor. The rotor has a central axis and is surrounded by a housing. The rotor's rotation creates a flow path that exits through a blood outflow port. The outflow port is located at the bottom of the device. The diagram also shows the inflow tube and the outflow to the aorta. Dimensions are indicated: ~1.0mm top and bottom, and ~0.5mm sides. Labels include: Central Axis, Inflow Path, Flow from left ventricle, Textured surface, Inflow cannula, Inflow Tube, Blood Outflow Port, Outflow to aorta, Rotor, Full MagLev™, Electromagnetic motor, and Magnetically Driven Rotor. Exemplary Source: Figure 1 from “HeartMate 3 in Lowest INTERMACS Profile Cohort: The Swiss Experience,” available at https://www.researchgate.net/publication/317276467_HeartMate_3_in_Lowest_INTERMACS_Profile_Cohort_The_Swiss_Experience. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.

EXHIBIT 11

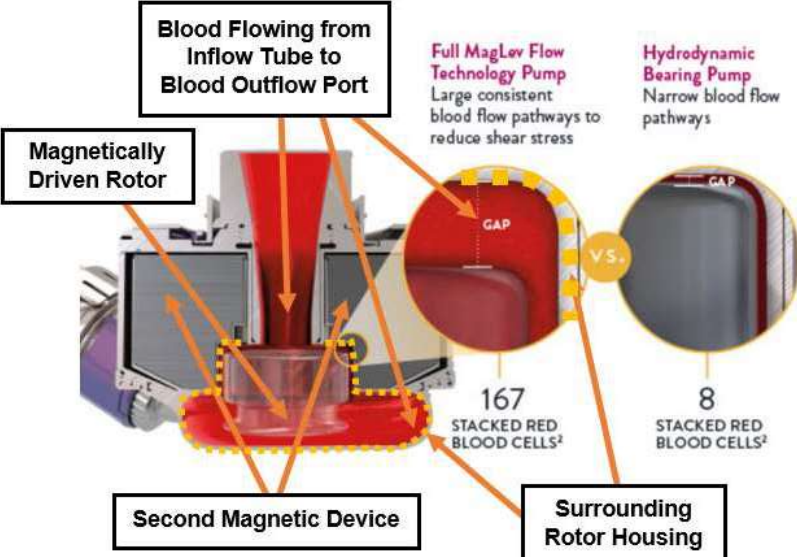
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
wherein the magneto coupling orients the magnetically driven rotor so that the magnetically driven rotor remains adjacent to and spaced apart from the surrounding rotor housing by the blood flowing from the inflow tube and to the blood outflow port; and	The magneto coupling of Abbott's '879 Accused Products orients the magnetically driven rotor so that the magnetically driven rotor remains adjacent to and spaced apart from the surrounding rotor housing by the blood flowing from the inflow tube and to the blood outflow port. For example, the second magnetic device of the HeartMate 3 (which Abbott calls a Motor, Stator, and/or MagLev Flow Technology) is configured to orient the magnetically driven rotor in its housing via the magneto coupling between the second magnetic device and the first magnetic device. And the second magnetic device orients the rotor via the magneto coupling so that it remains adjacent to and spaced apart from the surrounding rotor housing by the blood flowing from the inflow cannula to the outflow port that leads to the aorta.  The diagram illustrates the internal components of the HeartMate 3 pump. A central red arrow indicates 'Blood Flowing from Inflow Tube to Blood Outflow Port'. A 'Magnetically Driven Rotor' is shown at the bottom, connected to a 'Second Magnetic Device'. The rotor is surrounded by a 'Surrounding Rotor Housing'. Two circular insets compare the 'Full MagLev Flow Technology Pump' (left) with a 'Hydrodynamic Bearing Pump' (right). The MagLev pump shows a 'GAP' with '167 STACKED RED BLOOD CELLS²', while the hydrodynamic bearing pump shows a 'GAP' with '8 STACKED RED BLOOD CELLS²'. A 'VS.' symbol is between the insets. Text labels include 'Large consistent blood flow pathways to reduce shear stress' for the MagLev pump and 'Narrow blood flow pathways' for the hydrodynamic bearing pump.

EXHIBIT 11

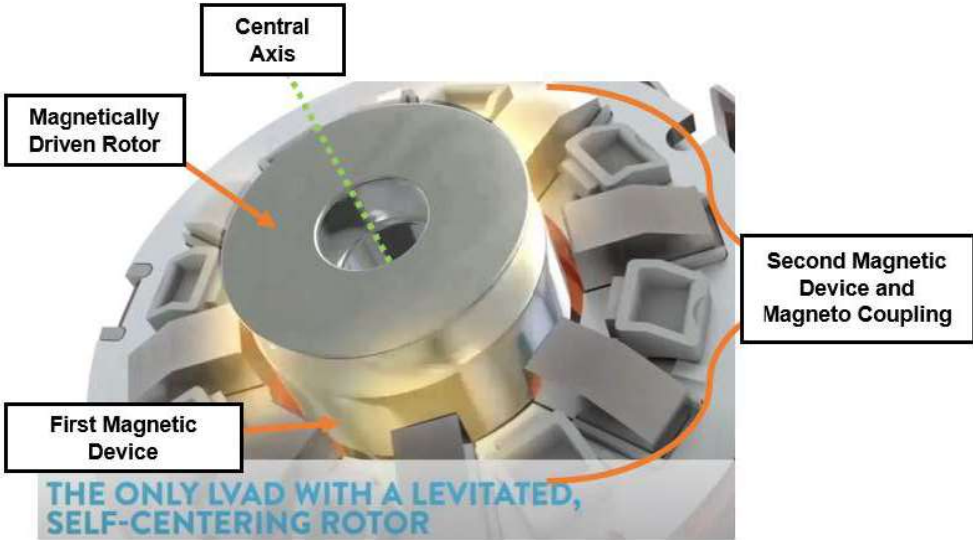
U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	 Exemplary Sources: HeartMate 3 Website at https://www.cardiovascular.abbott/us/en/hcp/products/heart-failure/left-ventricular-assist-devices/heartmate-3/about.html; <i>see also</i> video titled “Abbott’s HeartMate 3 LVAD,” available at https://www.youtube.com/watch?app=desktop&v=IbHN8e_OGJw; video titled “HeartMate 3 LVAD Peer-to-Peer Video Presentation” at https://youtu.be/_C-K-DCINbI. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.

EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products¹
an external control unit configured to regulate operation of the second magnetic device, the external control unit being positionable exterior to a body when the heart assist pump device is delivered to the heart, wherein the external control unit is connectable to the heart assist pump device for operating the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device.	Abbott's '879 Accused Products include an external control unit configured to regulate operation of the second magnetic device, the external control unit being positionable exterior to a body when the heart assist pump device is delivered to the heart, wherein the external control unit is connectable to the heart assist pump device for operating the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device. For example, Abbott's HeartMate 3 products include an external control unit, which Abbott calls the system controller. This external control unit is configured to be positioned exterior to the patient's body and connected to the heart assist pump device which Abbott calls the HeartMate 3 LVAD, when the device is delivered to the heart. The external control unit is also configured to regulate the operation of the second magnetic device, which Abbott calls the Motor, Stator, or MagLev Flow technology, to magnetically drive the rotation of the magnetically driven rotor as discussed above.

EXHIBIT 11

U.S. Patent No. 11,572,879 Claim	Abbott's '879 Accused Products ¹
	One end of the pump cable is connected to the pump. Heart Assist Pump Device Pump Cable External Control Unit Modular Cable Exemplary Source: Video titled “HeartMate 3 LVAD Patient Education Program – (2) System Overview,” available at https://www.youtube.com/watch?v=hmmpIKzmKe0; see also “HeartMate 3™ Left Ventricular Assist System Instructions for Use” at pages marked “1-3” and “1-10” - available for download at https://manuals.sjm.com/Search-Form?re=North-America&cc=US&ln=EN&ct=professional&qry=heartmate&ipp=10 via https://manuals.sjm.com/~media/manuals/product-manual-pdfs/5/7/571a1818-2da2-4c1a-b454-f6f5a3bc39b6.pdf. <i>See also</i> the evidence and analysis for the Preamble above and the other claim elements discussed herein.