

Response to Exhibit E-1
Responsive Chart for U.S. Patent No. 11,674,517 over HeartMate III: Pump Design for a Centrifugal LVAD with a Magnetically Levitated Rotor (“Bourque 2001”)

The following chart represents Miracor’s preliminary response to Defendants’ Invalidity Chart (“the invalidity chart”), identified as Exhibit E-1, for the application of “Bourque 2001” (also, “the reference;” K. Bourque, et al., “HeartMate III: Pump Design for a Centrifugal LVAD with a Magnetically Levitated Rotor,” ASAIO Journal 2001, 47:401-405) to U.S. Patent No. 11,674,517 (“the ’517 patent”). Defendants assert without evidence or explanation that Bourque 2001 is prior art to the ’517 patent. Miracor does not agree with or acquiesce to this assertion and reserves all rights to refute the status of Bourque 2001 as prior art.

Defendants assert that they apply the apparent claim constructions set forth in Miracor’s Initial Infringement Contentions. Defendants appear not to apply those apparent claim constructions, not to apply the apparent claim constructions set forth in Defendants’ Initial Noninfringement Contentions, and not to apply the plain and ordinary meaning of the claim terms. Nothing in this chart conveys agreement or acquiescence with any meaning that Defendants attempt to convey for any claim term.

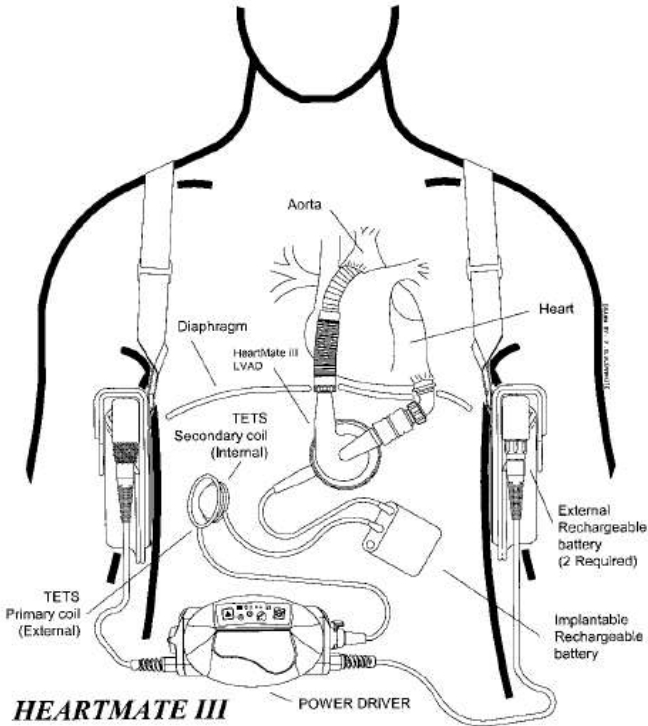
The invalidity chart fails to comply with LPR 2.3(b)(2). In particular, Defendants provide no detailed statement of whether the reference anticipates or renders obvious any claim. Instead Defendants assert that each element is disclosed, and if an element is not disclosed it is inherent, and if it is not inherent it can be found in one of the other cited references. Also, the invalidity chart provides no reason to combine any elements from different references.

The invalidity chart fails to comply with LPR 2.3(b)(3). In particular, Defendants do not identify where specifically in each alleged item of prior art each element of the asserted claims are found. All of the elements are met with a conclusory recitation that the reference discloses the claim element. Some of these recitations are followed by quotes from the reference, many of which do not include the relevant claim elements. At best, Defendants simply identify portions of the various references that they apparently believe disclose or render obvious various claim elements without explanation of how these disclosures correspond to the claim elements. Next, each element is met with an assertion that even if the element is not disclosed, it is inherent or obvious in combination with any of the other references, without any reasons given in support of this assertion. Miracor does not respond to Defendants’ arguments regarding combinations with other references as such a response would fall outside of LPR 2.5. This compliance with the rules does not indicate any agreement, acquiescence or waiver with respect to Defendants’ arguments regarding combinations with other references.

Because of Defendants’ failure to explain its purported invalidity positions, Miracor is limited in its ability to respond to them. Miracor reserves all rights to further respond should Defendants be allowed to expand their contentions. In the initial responsive chart

below, Miracor states as best it can, given Defendants' contentions, whether the reference includes the relevant claim element. Miracor may modify its response to each claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
1	[PRE] A system for assisting the blood circulation of a heart, comprising:	Bourque 2001 discloses "A system for assisting the blood circulation of a heart, comprising:" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 3	Yes, subject to the limitations stated at the top of this document and the comments made throughout. iracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.	
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1a] a heart assist pump device deliverable to the heart and comprising	Bourque 2001 discloses “a heart assist pump device deliverable to the heart and comprising” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at Abstract ABT-MIR-00000024 A long-term, compact left ventricular assist device (LVAD), the HeartMate III, has been designed and fabricated, featuring a centrifugal pump with a magnetically levitate rotor. Bourque 2001 at page 401 ABT-MIR-00000024 The advent of the left ventricular assist device (LVAD) has provided significant benefit to certain [congestive heart failure] patients since becoming clinically available. Bourque 2001 at page 404 ABT-MIR-00000024 It was a fundamental goal of the HeartMate III mechanical design to achieve optimal pumping performance and to enclose a sophisticated motor in the simplest possible way, this being the best means of achieving success.	No. Bourque 2001 does not disclose or suggest a heart assist pump device that is deliverable or delivered to the heart. Instead, the pump is located in the “least obtrusive position,” spaced apart from the heart and connected to the heart by what Bourque 2001 calls an “inflow cannula” which does not meet the recitations of the claimed “inflow tube” of the claimed “heart assist pump device.” Bourque 2001 at 402. Bourque 2001’s “inflow cannula” is part of what Bourque 2001 calls an “inflow subassembly” comprising “a section that partially decouples the position ... of the heart from the pump and facilitates pump recovery at explant.” <i>Id.</i> at 402. In vivo bovine testing involved similar cannulation that spaces the “heart assist pump device” away from the heart. <i>Id.</i> at 403.

Bourque 2001 at fig. 3.

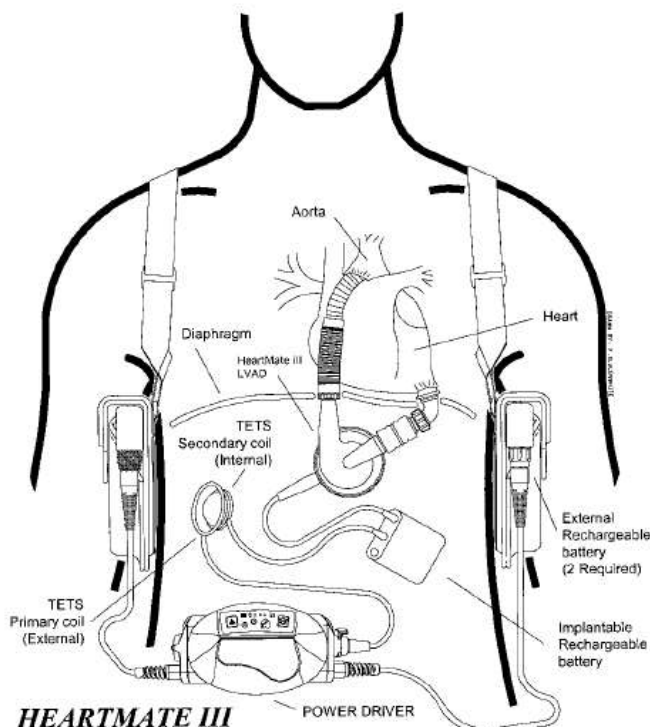
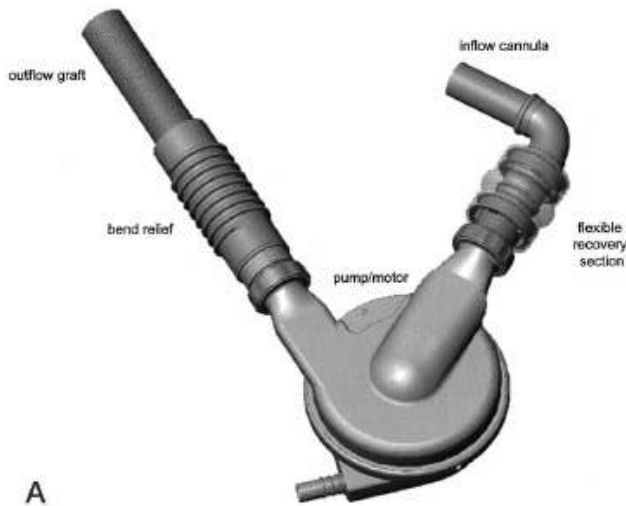
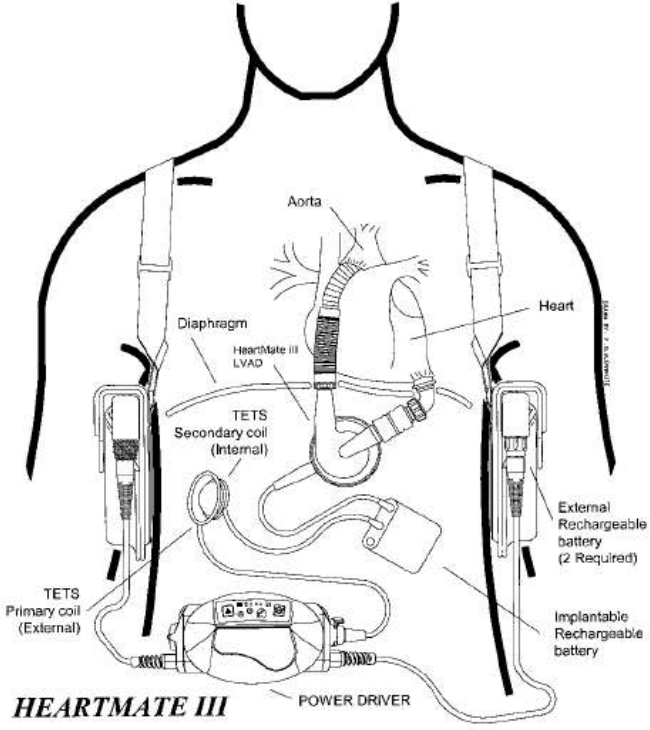


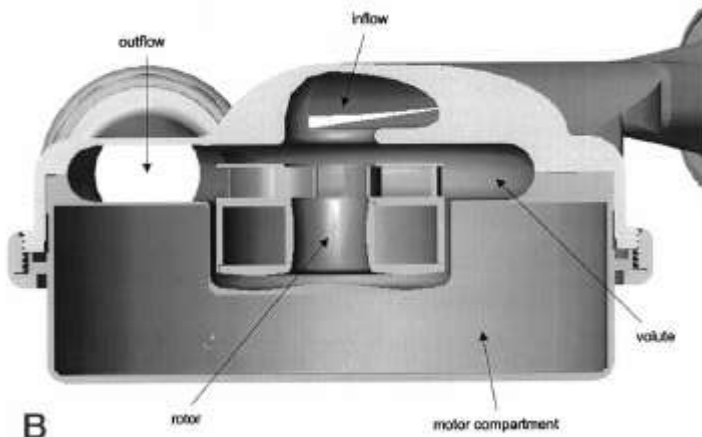
Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

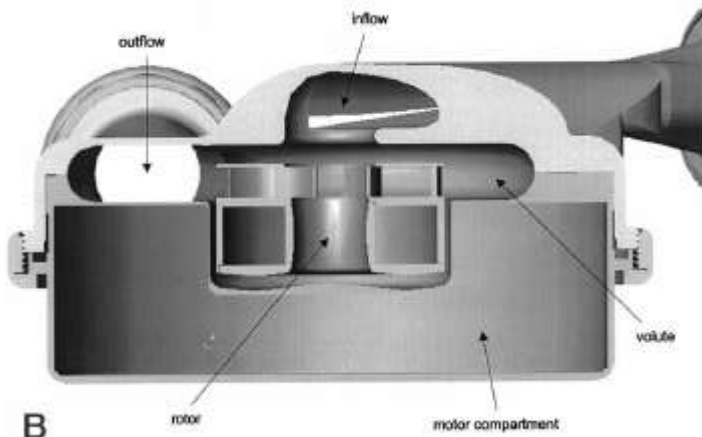
To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

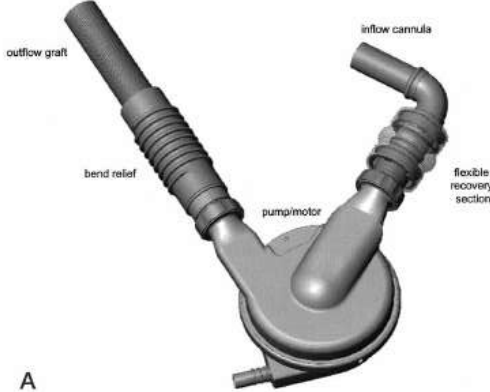
iracor may modify its response to this claim element subject to further explanation or definition by Defendants.

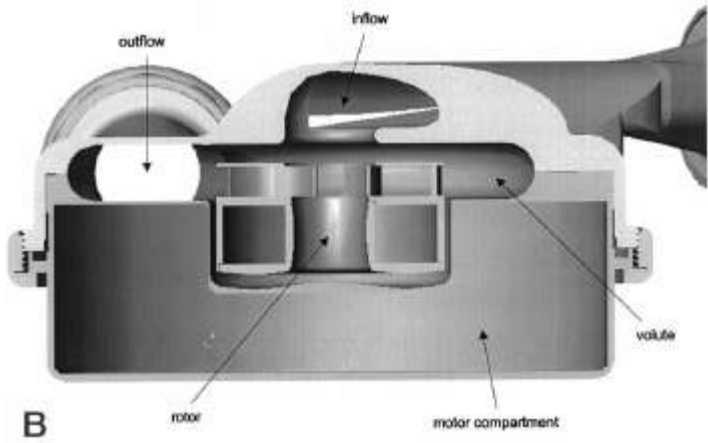
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[1b] an inflow tube defining a blood inflow path and having a suction end insertable into a ventricle of the heart;	Bourque 2001 discloses “an inflow tube defining a blood inflow path and having a suction end insertable into a ventricle of the heart” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at 401 ABT-MIR-00000024 The HeartMate III pump...comprises an upper housing that includes the inflow and outflow channels and the upper half of the volute;...an inflow subassembly that includes a left ventricular (LV) cannula and a section that partially decouples the position and motion of the heart from the pump and facilitates pump recovery at explant. Bourque 2001 at fig. 1A  The diagram, labeled 'A', shows a perspective view of the HeartMate III pump assembly. It features a central pump/motor unit. An inflow cannula is connected to the top of the pump, curving upwards and then downwards. An outflow graft is connected to the side of the pump, extending outwards. A bend relief is shown on the outflow graft. A flexible recovery section is shown on the inflow cannula. The entire assembly is mounted on a base.	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a suction end of an inflow tube, nor does it specifically identify the insertion of such a suction end into a ventricle of the heart. Moreover, Defendants do not identify an “inflow tube”—as explained below, Bourque 2001 does not disclose or suggest an inflow tube meeting the recitations of this claim.

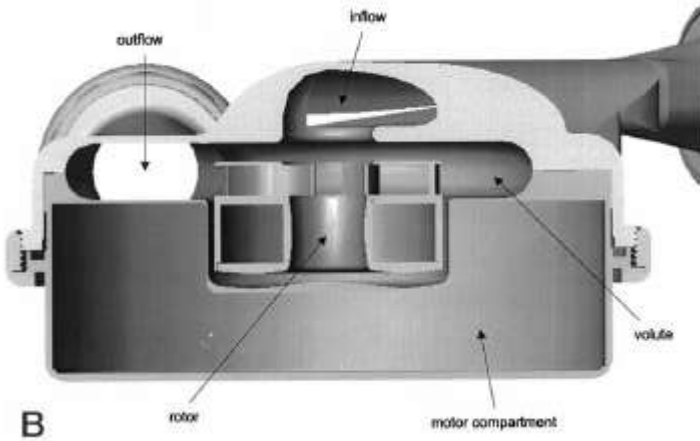
#	Claim Element	U.S. Patent No. 11,674,517 Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 3.  HEARTMATE III Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it	

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		obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1c] a magnetically driven rotor axially aligned with the inflow tube and	Bourque 2001 discloses “a magnetically driven rotor axially aligned with the inflow tube and” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  The diagram is a cross-sectional view of a medical device, labeled 'B' at the bottom left. It shows a central rotor assembly. An inflow tube is at the top, with an arrow pointing into the device. An outflow tube is on the left, with an arrow pointing out. A motor compartment is at the bottom, with an arrow pointing to it. A valve is on the right, with an arrow pointing to it. The rotor is in the center, with an arrow pointing to it. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	No. Bourque 2001 does not disclose a magnetically driven rotor axially aligned with the inflow tube. Defendants do not identify a rotor axis, nor do Defendants identify an inflow tube or an inflow tube direction. Miracor notes that, in the figures presented, the rotor axis appears to be orthogonal to what Bourque 2001 calls the “inflow cannula.”

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1d] [the magnetically driven rotor] being spaced apart from the suction end when the suction end of the inflow tube is inserted into the ventricle,	Bourque 2001 discloses “[the magnetically driven rotor] being spaced apart from the suction end when the suction end of the inflow tube is inserted into the ventricle,” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B 	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a suction end of an inflow tube, nor does it specifically identify the insertion of such a suction end into a ventricle of the heart. Moreover, Defendants do not identify an “inflow tube”—as explained below, Bourque 2001 does not disclose or suggest an inflow tube meeting the recitations of this claim. Accordingly, Defendants do not specifically identify a rotor being spaced apart from a suction end.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 1A  The diagram shows a medical device with a central pump/motor unit. An outflow graft extends from the pump, featuring a bend relief section. An inflow cannula is connected to the pump, and a flexible recovery section is also shown. The entire assembly is labeled 'A'. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1e] the magnetically driven rotor being rotatable within a surrounding	Bourque 2001 discloses “the magnetically driven rotor being rotatable within a surrounding rotor housing to act upon blood flowing from the inflow tube toward the rotor” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3). Defendants fail to identify an inflow tube or blood flowing from an inflow tube and thus do not identify the rotor acting “upon blood

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	rotor housing to act upon blood flowing from the inflow tube toward the rotor	Bourque 2001 at page 402 ABT-MIR-00000024 The HeartMate III pump...comprises...a lower housing that includes the lower half of the volute and a cavity for the rotor, in which the motor is enclosed. Bourque 2001 at fig. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	flowing from the inflow tube toward the rotor.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
	[1f] the magnetically	Bourque 2001 discloses “the magnetically driven rotor being rotatable about a central axis and” at least under the apparent construction and	No. Defendants’ bare citation in support fails to comply with

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	driven rotor being rotatable about a central axis and	scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 402 ABT-MIR-00000024 To orient the pump in the least obtrusive position...it was decided that the rotational axis of the pump's rotor should be perpendicular to the body's long axis. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	LPR 2.3(b)(3) and does not specifically identify a central axis. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1g] [the magnetically driven rotor] being rigidly coupled to [a first magnetic device] and	Bourque 2001 discloses “[the magnetically driven rotor] being rigidly coupled to [a first magnetic device] and” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as show in Figure 4. Bourque 2001 at page 401 ABT-MIR-00000024 a rotor that includes an impeller and passively magnetic elements;	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first magnetic device, and does not specifically identify a rigid coupling. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

Bourque 2001 at fig. 4

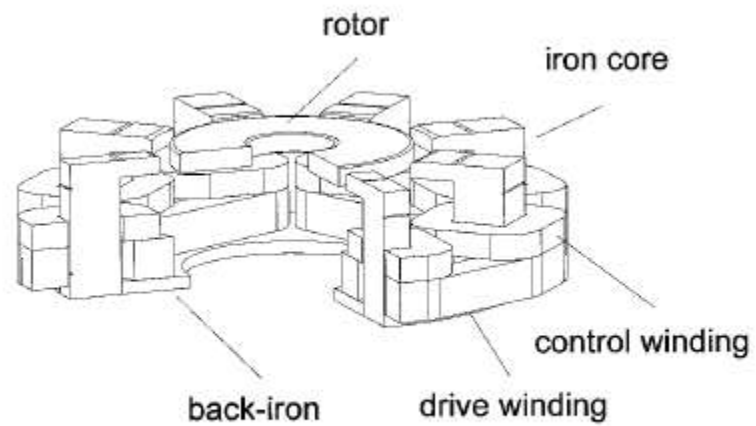
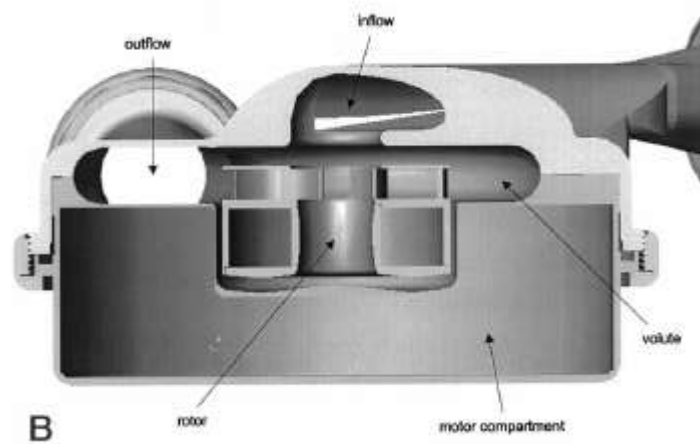


Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure.

Bourque 2001 at fig. 1B



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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1h] [the magnetically driven rotor] axially adjacent to a first magnetic device	Bourque 2001 discloses "[the magnetically driven rotor] axially adjacent to a first magnetic device" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a first magnetic device, and thus does not specifically identify an axially adjacent position of a first magnetic device. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

Bourque 2001 at fig. 4

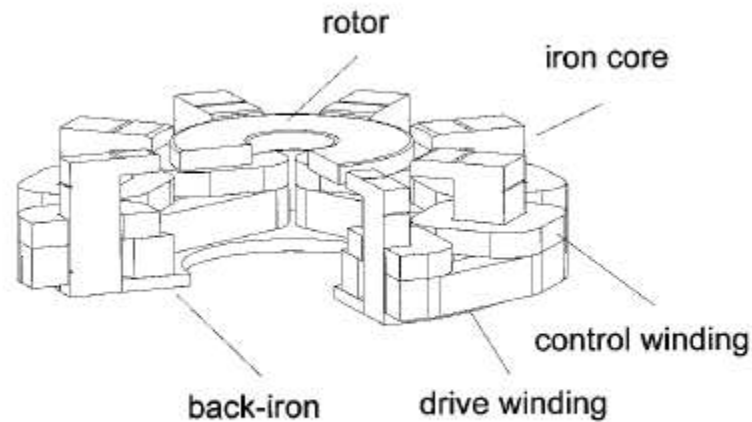
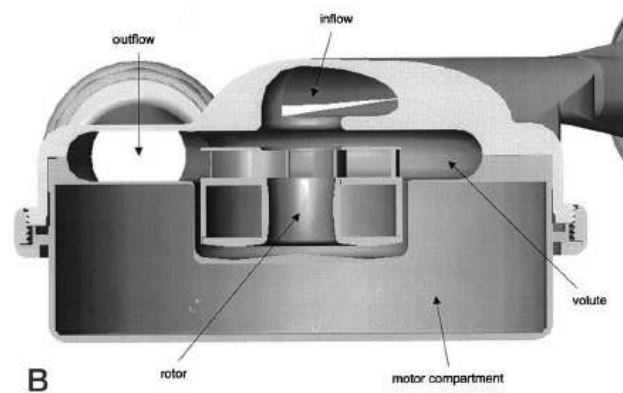
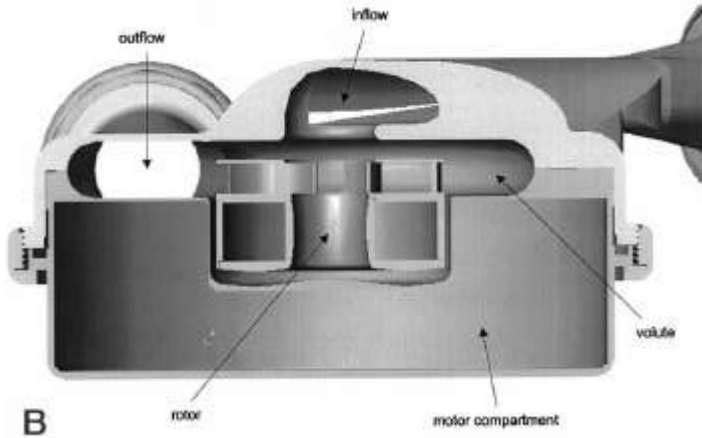


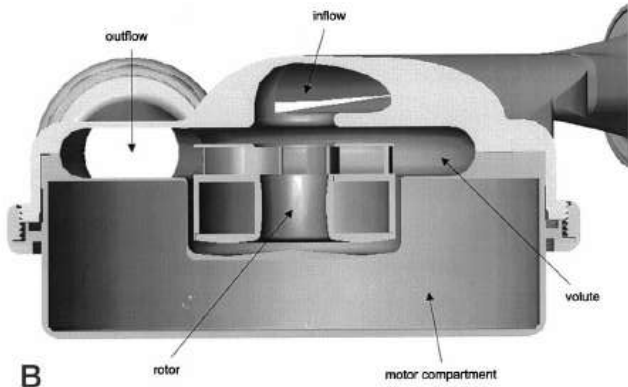
Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure.

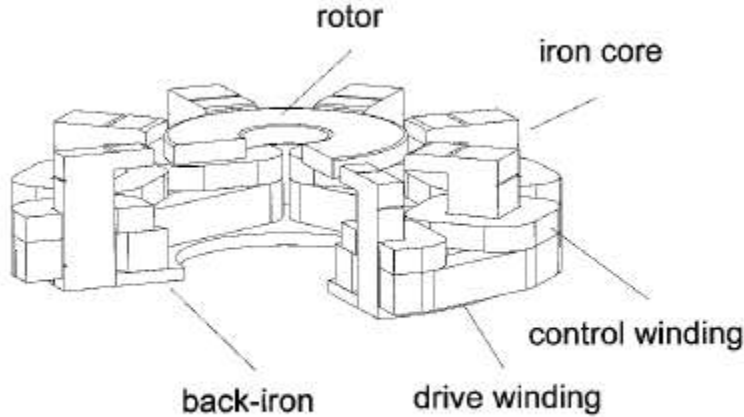
Bourque 2001 at fig. 1B

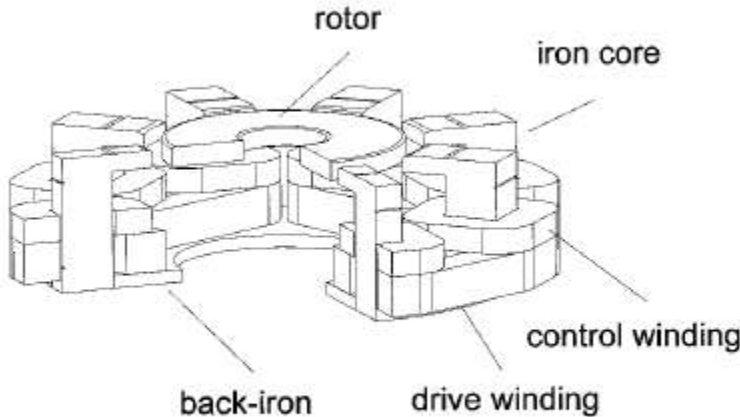


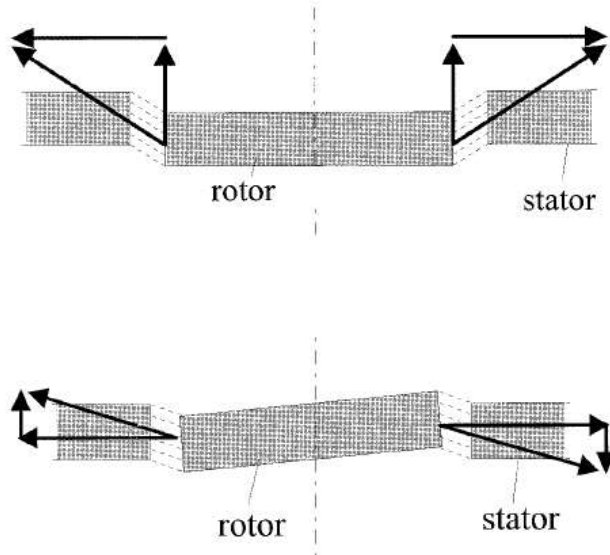
To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of

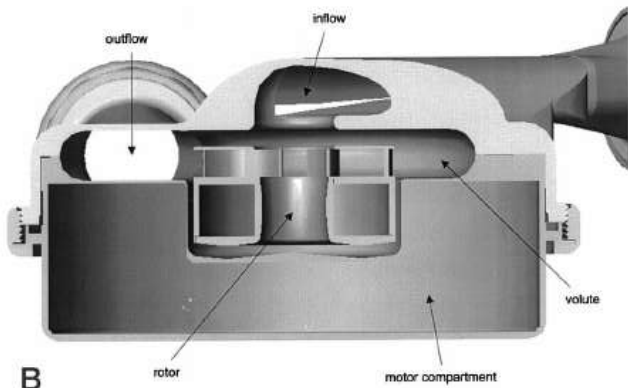
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1i] that [first magnetic device] is located within the surrounding rotor housing;	Bourque 2001 discloses "that [first magnetic device] is located within the surrounding rotor housing;" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 402 ABT-MIR-00000024 The HeartMate III pump...comprises...a lower housing that includes the lower half of the volute and a cavity for the rotor, in which the motor is enclosed. Bourque 2001 at fig. 1B 	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a first magnetic device, and thus does not specifically identify a first magnetic device within the surrounding rotor housing. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1j] a second magnetic device axially aligned with the inflow tube and	Bourque 2001 discloses "a second magnetic device axially aligned with the inflow tube and" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at fig. 4	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not identify the claimed inflow tube, does not specifically identify a second magnetic device, does not identify a direction or axis of an inflow tube, and thus does not specifically identify an axially aligned position of a second magnetic device with respect to an inflow tube as recited in the claim. Miracor notes that the portion of Bourque 2001's Fig. 1B labeled as "inflow" appears to be orthogonal to Bourque 2001's motor. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

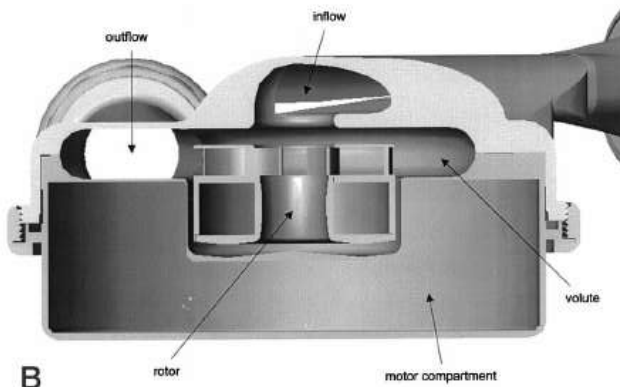
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1k] [the second magnetic device] positioned to	Bourque 2001 discloses “[the second magnetic device] positioned to magnetically drive rotation of the magnetically driven rotor via a magneto coupling with the first magnetic device” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a second magnetic device, does not

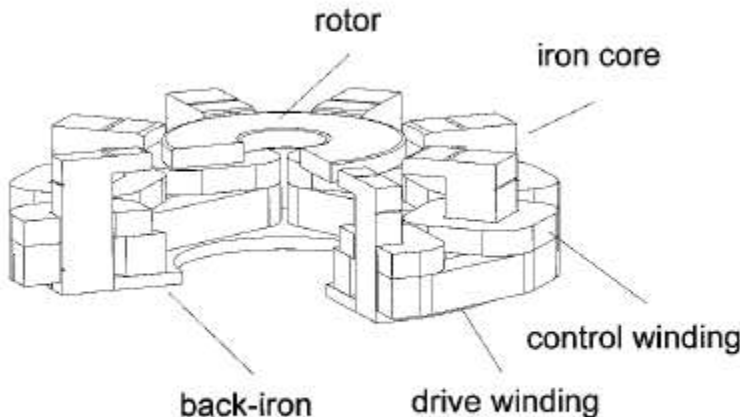
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	magnetically drive rotation of the magnetically driven rotor via a magneto coupling with the first magnetic device	Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom.	specifically identify a first magnetic device, and thus does not specifically identify a position for a second magnetic device to magnetically drive rotation of the magnetically driven rotor via a magneto coupling with the first magnetic device. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

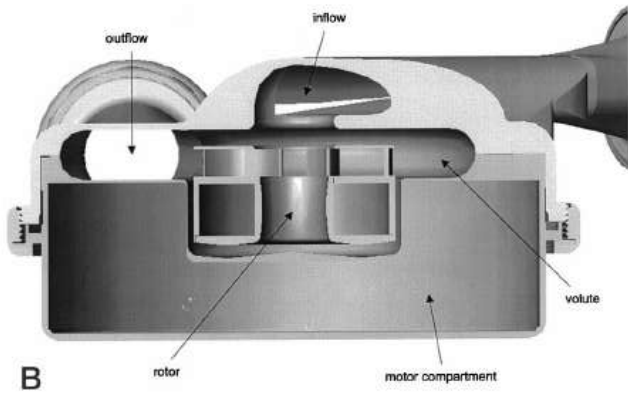
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 5  Figure 5. Passive magnetic levitation. Above, Restoration force when axially displaced. Below, Restoration force when tilted. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[11] while [the second	Bourque 2001 discloses "while [the second magnetic device is] being spaced apart and sealed from both the magnetically driven rotor and the	No. Defendants' bare citation in support fails to comply with

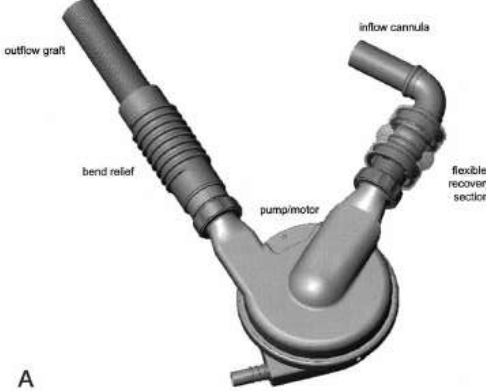
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	magnetic device is] being spaced apart and sealed from both the magnetically driven rotor and the first magnetic device by at least one sealing wall	first magnetic device by at least one sealing wall” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom.	LPR 2.3(b)(3), does not specifically identify a second magnetic device, and does not specifically identify a first magnetic device or a seal. Defendants’ argument that elements can be found in a different reference fails to comply with the relevant rules because Defendants do not identify with specificity where such elements can be found in that different reference. Miracor does not further respond to Defendants’ arguments regarding combination with other references as such a response would fall outside of LPR 2.5. Miracor’s compliance with the rules does not indicate any agreement, acquiescence or waiver with respect to Defendants’ arguments regarding combinations with other references. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

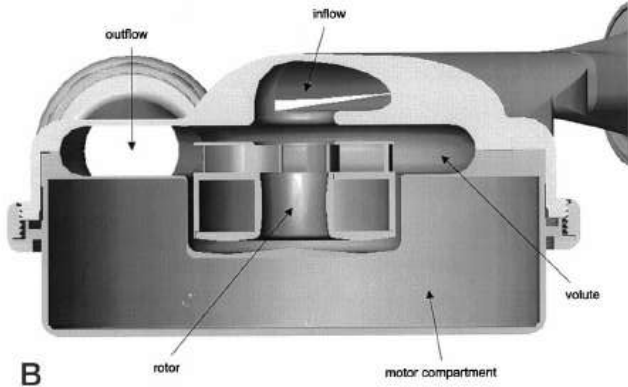
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at page 402 ABT-MIR-00000024 By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. However, both of these backflows consume hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces... [T]he gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references (e.g., Schob '618 Ex. E-5) identified in the cover pleading of Defendants' Initial Invalidity Contentions. For example, a person of ordinary skill in the art would know that if a magnet comes into contact with blood, it can adversely affect the blood so as to become toxic or lethal, or cause corrosion, and that therefore the magnet must be sealed from the blood. Further, a person of ordinary skill in the art would have been motivated to combine Bourque 2001 with one or more other references identified in the cover pleading of Defendants' Initial Invalidity Contentions (e.g., Schob '618 Ex. E-5) with a reasonable expectation of success because each of these references contains familiar elements within the similar fields of endeavor to address similar known problems according to known methods which would yield predictable results.	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[1m] the second magnetic device being positioned axially spaced apart from the magnetically driven rotor;	Bourque 2001 discloses “the second magnetic device being positioned axially spaced apart from the magnetically driven rotor;” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at fig. 4	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a second magnetic device or relative positions between first and second magnetic devices and the rotor. Accordingly, Defendants do not specifically identify a second magnetic device “positioned axially spaced apart from the magnetically driven rotor.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

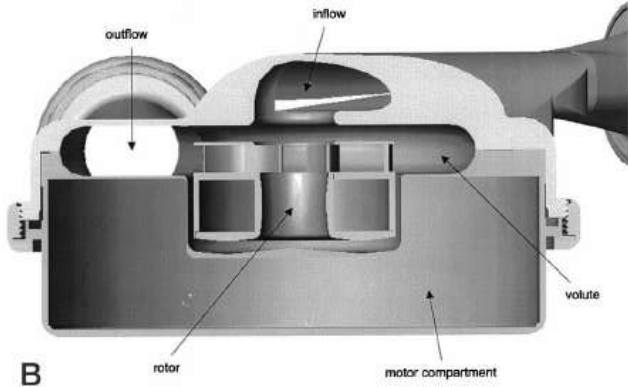
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1n] a blood outflow port positioned radially adjacent the magnetically driven rotor such that blood driven by the magnetically driven rotor is configured to exit the surrounding rotor housing in a direction transverse to the central axis of the magnetically driven rotor,	Bourque 2001 discloses “a blood outflow port positioned radially adjacent the magnetically driven rotor such that blood driven by the magnetically driven rotor is configured to exit the surrounding rotor housing in a direction transverse to the central axis of the magnetically driven rotor,” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  The diagram is a cross-sectional view of a pump assembly. It features a central rotor with multiple vanes, housed within a motor compartment. An inflow port is located at the top, and an outflow port is located on the left side. The rotor is surrounded by a volute housing. The diagram is labeled 'B' at the bottom left.	LPR 2.3(b)(3) and does not specifically identify a direction of blood exiting the housing or a central axis—as a result, there is no indication that the “blood driven by the magnetically driven rotor is configured to exit the surrounding rotor housing in a direction transverse to the central axis.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 1A  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1o] wherein when the magnetically driven rotor is rotated, the magnetically driven rotor remains	Bourque 2001 discloses “wherein when the magnetically driven rotor is rotated, 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” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not identify the inflow tube or blood outflow port as discussed above and thus also does not specifically identify the blood flowing from the inflow tube and to the blood

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	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	Bourque 2001 at fig. 1B  Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. Bourque 2001 at page 402 ABT-MIR-00000024 By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward	outflow port as recited in the claim. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		thrust load on the rotor. However, both of these backflows consume hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces... [T]he gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[1p] an external control unit configured to regulate operation of the second magnetic device, wherein the external control unit is connectable to the heart assist pump	Bourque 2001 discloses "an external control unit configured to regulate operation of the second magnetic device, wherein the external control unit is connectable to the heart assist pump device for controlling the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device." at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first or second magnetic device or magneto coupling as discussed above, and does not specifically identify any control of the second magnetic device by the shelf mounted electronics. Defendants' argument that elements can be found in a different reference fails to comply with the relevant rules because Defendants do not

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	device for controlling the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device.	Bourque 2001 at fig. 1B  Bourque 2001 at page 403 ABT-MIR-00000024 The electronics for power and control of the LVAD and for data acquisition resided on a shelf and alongside the cages containing the calves. The animals were continuously monitored for general welfare, and certain parameters such as arterial pressure, pump and pulmonary artery volume flow rates, pump speed, and blood chemistry (including plasma free hemoglobin) were periodically recorded. In two animals, measurement of pressure head throughout the duration of the studies were made with flocked carotid lines and fluid filled LV catheters.	identify with specificity where such elements can be found in that different reference. Miracor does not further respond to Defendants' arguments regarding combination with other references as such a response would fall outside of LPR 2.5. Miracor's compliance with the rules does not indicate any agreement, acquiescence or waiver with respect to Defendants' arguments regarding combinations with other references. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

Bourque 2001 at fig. 3.

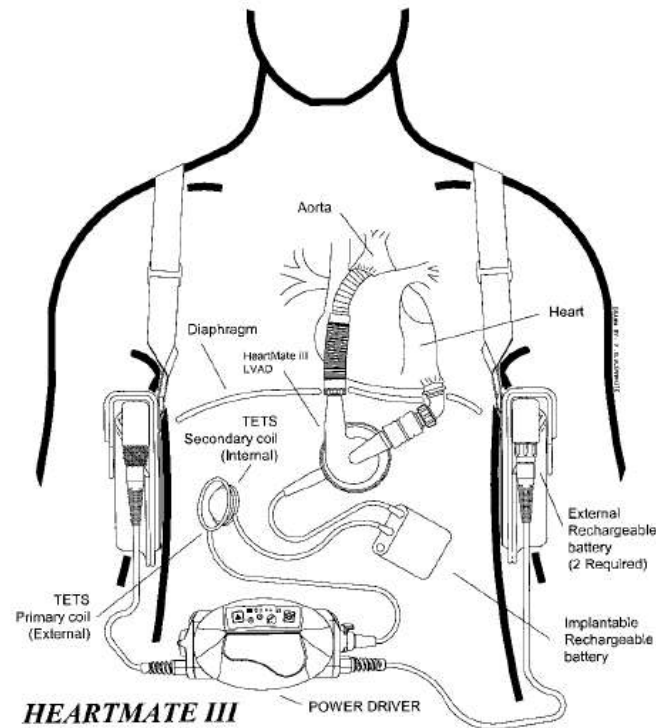
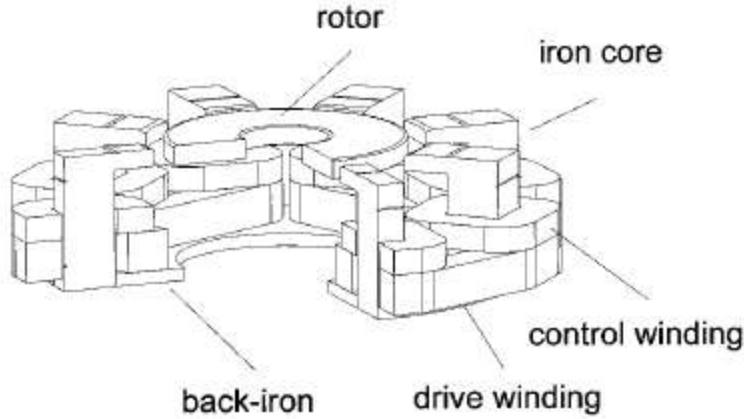


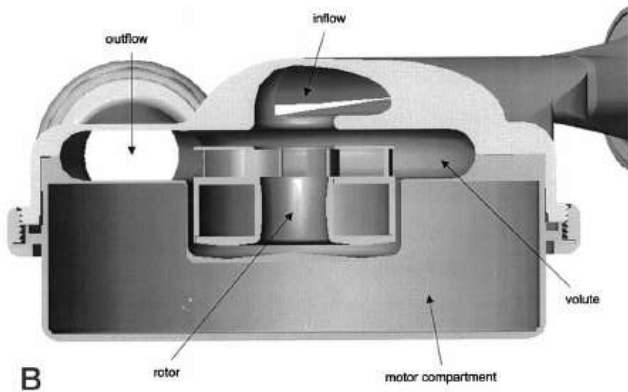
Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified (e.g., Schob '705 Ex. E-6, Bearnson '066 Ex. E-20) in the cover pleading of Defendants' Initial Invalidity Contentions. For example, a person of ordinary skill in the art would know that per Earnshaw's Theorem, magnetic levitation requires constant power

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		and an active control system to keep the levitation stable. Further, a person of ordinary skill in the art would have been motivated to combine Bourque 2001 with one or more other references identified in the cover pleading of Defendants' Initial Invalidity Contentions (e.g., Schob '705 Ex. E-6, Bearnson '066 Ex. E-20) with a reasonable expectation of success because each of these references contains familiar elements within the similar fields of endeavor to address similar known problems, according to known methods which would yield predictable results.	
2 ¹	The system of claim 1, wherein the magnetically driven rotor comprises guide surfaces to produce centrifugal flow components.	Bourque 2001 discloses "The system of claim 1, wherein the magnetically driven rotor comprises guide surfaces to produce centrifugal flow components" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 A long-term, compact left ventricular assist device (LVAD), the HeartMate III, has been designed and fabricated, featuring a centrifugal pump with a magnetically levitated rotor. Bourque 2001 at page 402 ABT-MIR-00000024 An opening in the shroud (<i>i.e.</i>, the cover across the top of the blades on the rotor) permits fluid leaving the inflow conduit to enter the impeller. This results in a backflow path from the trailing edges of the blades (where the pressure is relatively high), over the shroud, and back to the leading edges of the blades. By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would	Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify any centrifugal flow components or any guide surfaces that produce centrifugal flow components. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

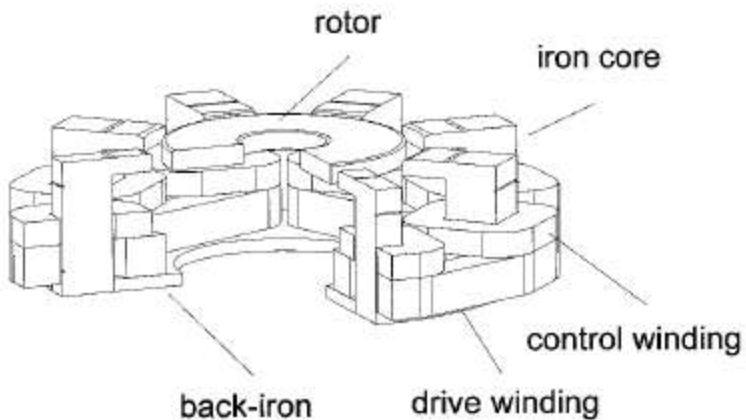
¹ Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
3 ²	The system of claim 2, wherein the surrounding rotor housing comprises the at least one sealing wall, and the first magnetic device is positioned between the second magnetic device and the magnetically driven rotor.	Bourque 2001 discloses “The system of claim 2, wherein the surrounding rotor housing comprises the at least one sealing wall, and the first magnetic device is positioned between the second magnetic device and the magnetically driven rotor.” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references (e.g., Schob '618 Ex. E-5) identified in the cover	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3), does not identify the method of claim 2 or specifically identify the first or second magnetic device for the reasons discussed above with respect to claims 1 and 2, and does not specifically identify a sealing wall. Defendants’ argument that elements can be found in a different reference fails to comply with the relevant rules because Defendants do not identify with specificity where such elements can be found in that different reference. Miracor does not further respond to Defendants’ arguments regarding combination with other references as such a response would fall outside of LPR 2.5. Miracor’s compliance with the rules does not indicate any agreement, acquiescence or waiver with respect to

² Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

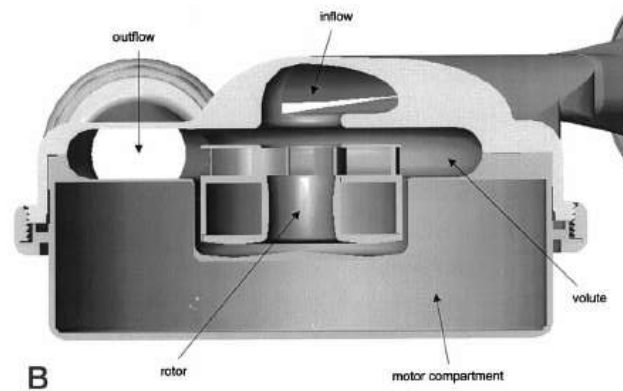
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		pleading of Defendants' Initial Invalidity Contentions. For example, a person of ordinary skill in the art would know that if a magnet comes into contact with blood, it can adversely affect the blood so as to become toxic or lethal, or cause corrosion, and that therefore the magnet must be sealed from the blood. Further, a person of ordinary skill in the art would have been motivated to combine Bourque 2001 with one or more other references identified in the cover pleading of Defendants' Initial Invalidity Contentions (e.g., Schob '618 Ex. E-5) with a reasonable expectation of success because each of these references contains familiar elements within the similar fields of endeavor to address similar known problems according to known methods which would yield predictable results.	Defendants' arguments regarding combinations with other references. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
4	The system of claim 3, wherein the first magnetic device rotates together with the magnetically driven rotor relative to the surrounding rotor housing.	Bourque 2001 discloses "The system of claim 3, wherein the first magnetic device rotates together with the magnetically driven rotor relative to the surrounding rotor housing" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III pump...comprises...a <i>rotor</i> that includes an impeller and passively magnetic elements. Bourque 2001 at page 402-3 ABT-MIR-00000024	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first magnetic device. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		The HeartMate III motor includes drive and levitation in a single magnetic structure as show in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom...and actively magnetically levitated in the remaining degrees of freedom. Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. Bourque 2001 at page 404 ABT-MIR-00000024 The very simple main flow path is a consequence of the motor's 'J' core configuration...which places an imaginary plane near the mid-height of the pump, below which are confined the motor and levitation elements, and above which the hydrodynamic elements are permitted free reign.	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
10 ³	The system of claim 1, wherein both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap during rotation of the magnetically driven rotor.	Bourque 2001 discloses "The system of claim 1, wherein both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap during rotation of the magnetically driven rotor." at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first magnetic device, does not specifically identify any gap sizing or extension, and thus does not specifically identify the first magnetic device being "entirely spaced apart from the surrounding rotor housing by a gap." Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

³ Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

Bourque 2001 at fig. 1B



Bourque 2001 at page 401 | ABT-MIR-00000024

The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability.

Bourque 2001 at page 402-403 | ABT-MIR-00000024

The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom.

To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
14 ⁴	The system of claim 10, wherein the external control unit is configured to regulate operation of the second magnetic device based on a control value.	Bourque 2001 discloses “The system of claim 10, wherein the external control unit is configured to regulate operation of the second magnetic device based on a control value.” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 403 ABT-MIR-00000024 The electronics for power and control of the LVAD and for data acquisition resided on a shelf and alongside the cages containing the calves. The animals were continuously monitored for general welfare, and certain parameters such as arterial pressure, pump and pulmonary artery volume flow rates, pump speed, and blood chemistry (including plasma free hemoglobin) were periodically recorded. In two animals, measurement of pressure head throughout the duration of the studies were made with flocked carotid lines and fluid filled LV catheters.	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3), does not identify a second magnetic device, and does not specifically identify any control of a second magnetic device by the shelf mounted electronics. Defendants do not indicate any fixed control value. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

⁴ Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

Bourque 2001 at fig. 3.

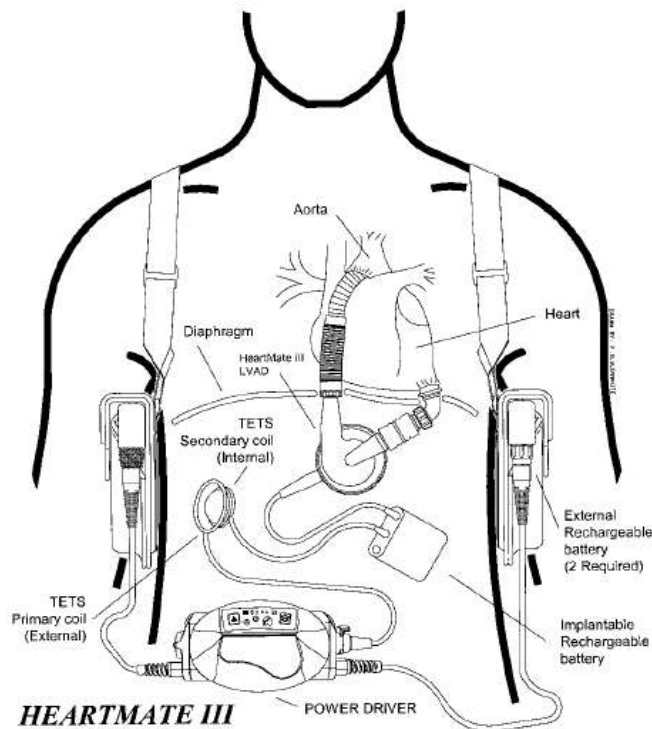
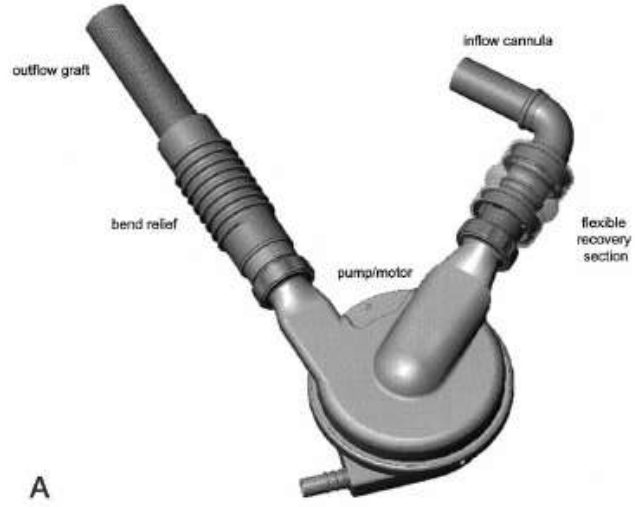


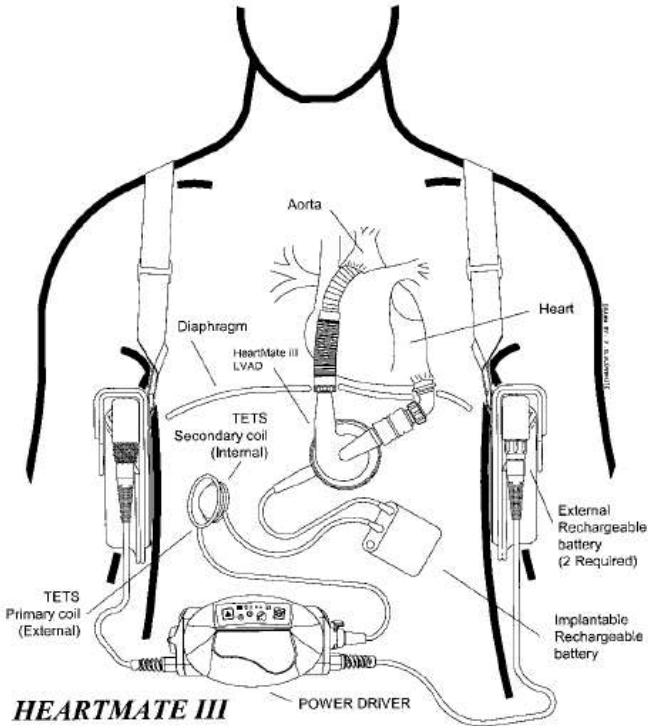
Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

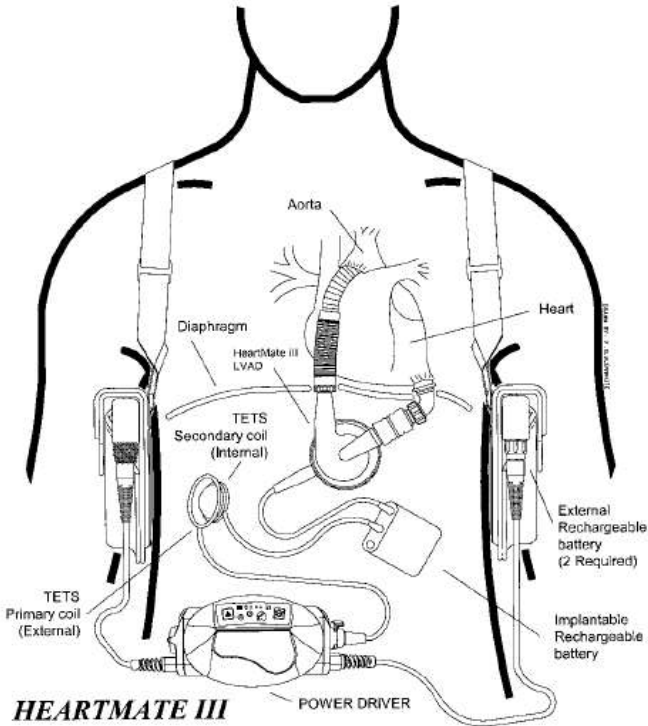
15	The system of claim 14,	Bourque 2001 discloses "The system of claim 14, wherein the control value indicative of a defined cardiac output for control of the heart assist	No. Defendants' bare citation in support fails to comply with
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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	wherein the control value indicative of a defined cardiac output for control of the heart assist pump device.	pump device” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. See analysis of 14. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants’ Initial Invalidity Contentions.	LPR 2.3(b)(3), does not identify a second magnetic device, and does not specifically identify any control of a second magnetic device by the shelf mounted electronics. Defendants do not indicate any fixed control value indicative of cardiac output. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
17	The system of claim 1, wherein heart assist pump device is a catheter device.	Bourque 2001 discloses “The system of claim 1, wherein heart assist pump device is a catheter device.” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at 401 ABT-MIR-00000024 The HeartMate III pump...comprises an upper housing that includes the inflow and outflow channels and the upper half of the volute;...an inflow subassembly that includes a left ventricular (LV) cannula and a section that partially decouples the position and motion of the heart from the pump and facilitates pump recovery at explant.	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not identify the system of claim 1, for the reasons discussed with respect to claim 1 above. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

		Bourque 2001 at fig. 1A  A Bourque 2001 at fig. 3.	
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U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.	
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
21	[PRE] A system for assisting blood circulation of a heart, the system comprising:	Bourque 2001 discloses "A system for assisting blood circulation of a heart, the system comprising:" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 3	Yes, subject to the limitations stated at the top of this document and the comments made throughout. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 HEARTMATE III Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.	
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21a] a heart assist pump device deliverable to the heart and comprising:	Bourque 2001 discloses “a heart assist pump device deliverable to the heart and comprising:” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at Abstract ABT-MIR-00000024 A long-term, compact left ventricular assist device (LVAD), the HeartMate III, has been designed and fabricated, featuring a centrifugal pump with a magnetically levitate rotor. Bourque 2001 at page 401 ABT-MIR-00000024 The advent of the left ventricular assist device (LVAD) has provided significant benefit to certain [congestive heart failure] patients since becoming clinically available. Bourque 2001 at page 404 ABT-MIR-00000024 It was a fundamental goal of the HeartMate III mechanical design to achieve optimal pumping performance and to enclose a sophisticated motor in the simplest possible way, this being the best means of achieving success.	No. Bourque 2001 does not disclose or suggest a heart assist pump device that is deliverable or delivered to the heart. Instead, the pump is located in the “least obtrusive position,” spaced apart from the heart and connected to the heart by what Bourque 2001 calls an “inflow cannula” which does not meet the recitations of the claimed “inflow tube” of the claimed “heart assist pump device.” Bourque 2001 at 402. Bourque 2001's “inflow cannula” is part of what Bourque 2001 calls an “inflow subassembly” comprising “a section that partially decouples the position ... of the heart from the pump and facilitates pump recovery at explant.” <i>Id.</i> at 402. In vivo bovine testing involved similar cannulation that spaces the “heart assist pump device” away from the heart. <i>Id.</i> at 403.

Bourque 2001 at fig. 3.

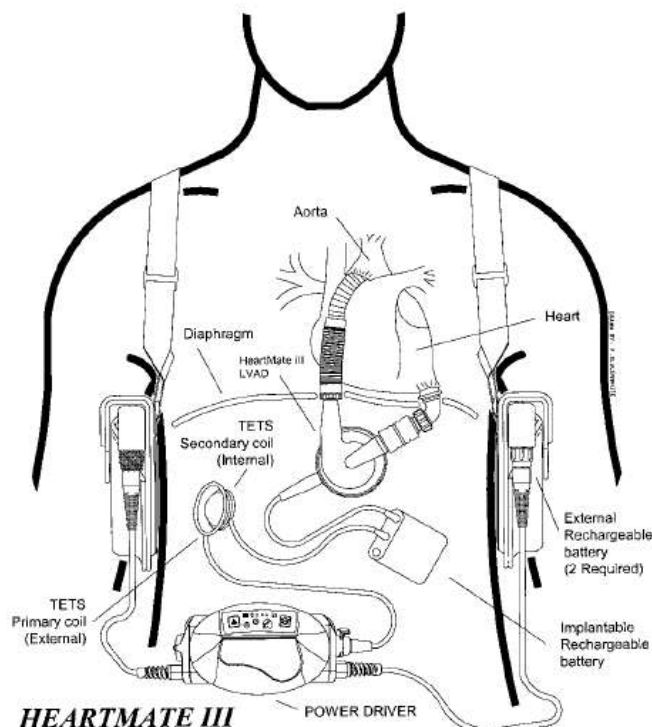
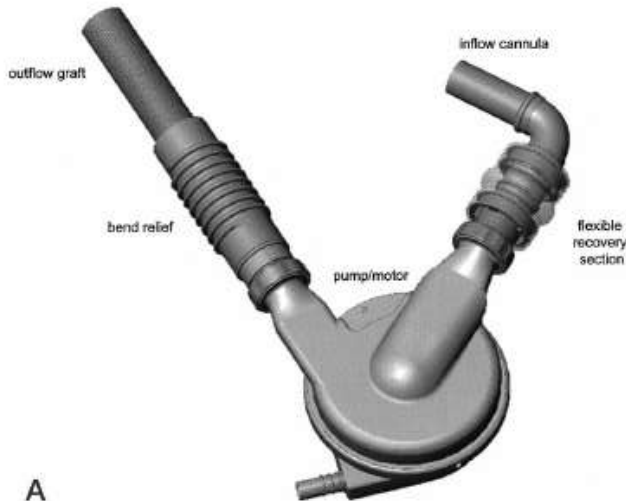
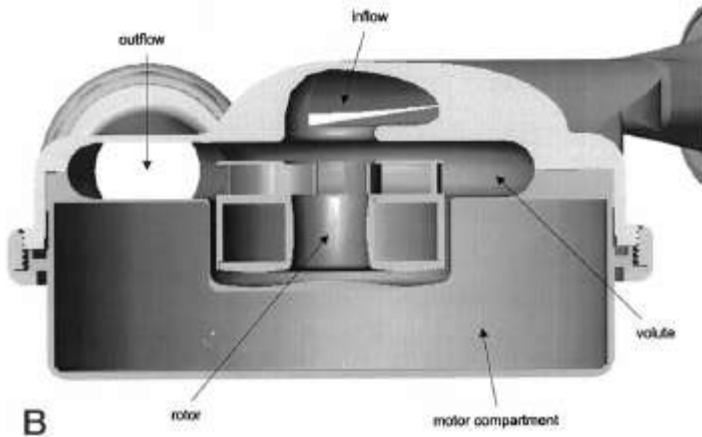


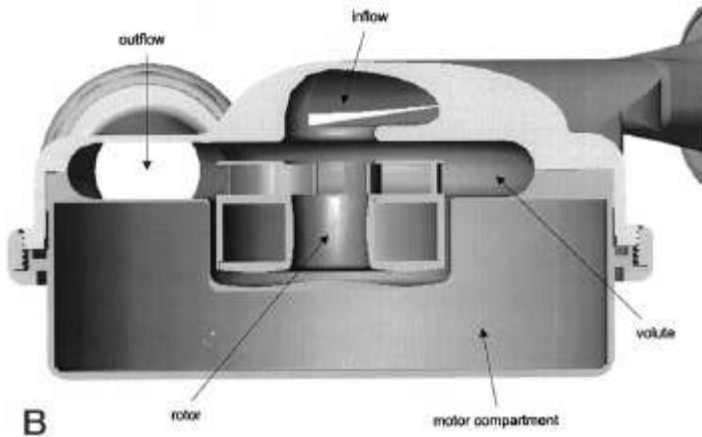
Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

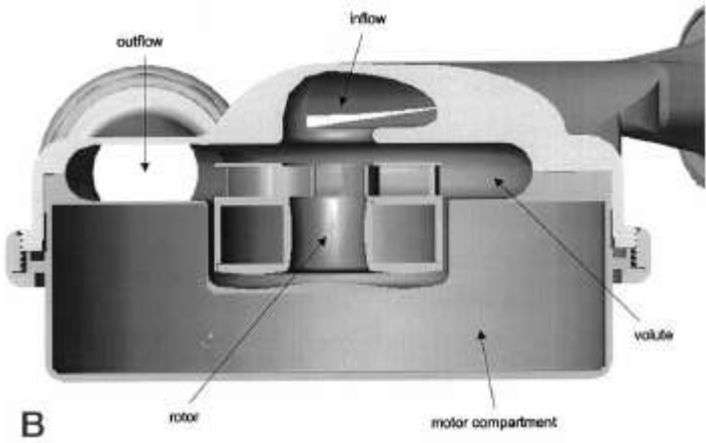
To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

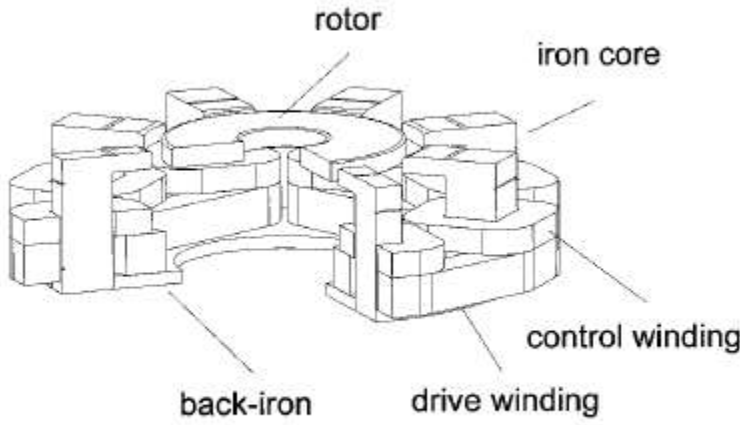
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[21b] an inflow tube defining a blood inflow path along an inflow axis and being insertable into a left ventricle;	Bourque 2001 discloses “an inflow tube defining a blood inflow path along an inflow axis and being insertable into a left ventricle;” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at 401 ABT-MIR-00000024 The HeartMate III pump...comprises an upper housing that includes the inflow and outflow channels and the upper half of the volute;...an inflow subassembly that includes a left ventricular (LV) cannula and a section that partially decouples the position and motion of the heart from the pump and facilitates pump recovery at explant. Bourque 2001 at fig. 1A 	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a suction end of an inflow tube, nor does it specifically identify the insertion of such a suction end into a ventricle of the heart. Moreover, Defendants do not identify an “inflow tube”—as explained below, Bourque 2001 does not disclose or suggest an inflow tube meeting the recitations of this claim. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

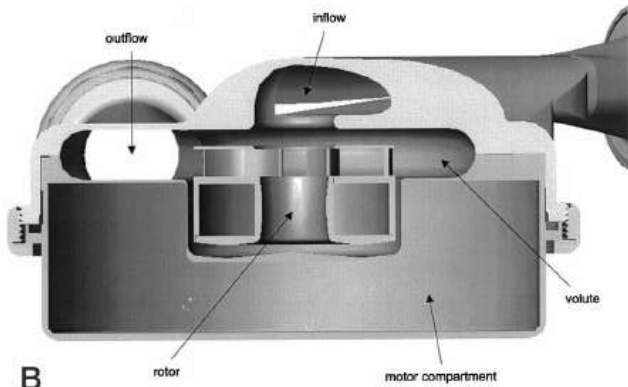
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 1B  The diagram is a cross-sectional view of a medical device, likely a pump or valve. It features a central rotor within a motor compartment. An inflow tube is positioned at the top, and an outflow tube is on the left. A volute is shown on the right side. The entire assembly is housed within a casing. The label 'B' is at the bottom left of the diagram. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21c] one or more walls at least partially defining a chamber to	Bourque 2001 discloses “one or more walls at least partially defining a chamber to receive blood from the inflow tube” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify chamber walls defining a chamber to

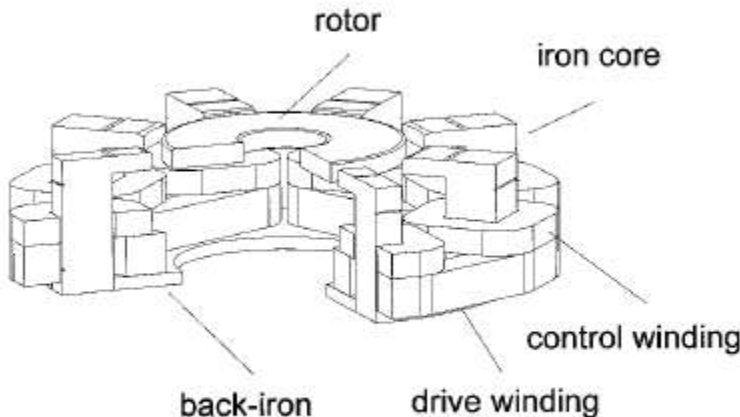
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	receive blood from the inflow tube;	Bourque 2001 at page 402 ABT-MIR-00000024 The HeartMate III pump...comprises...a lower housing that includes the lower half of the volute and a cavity for the rotor, in which the motor is enclosed. Bourque 2001 at fig. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	receive blood and further does not specifically identify an inflow tube. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

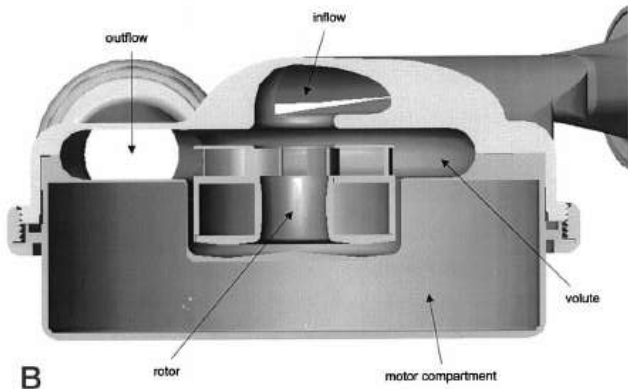
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[21d] a magnetically driven rotor axially aligned with the inflow axis and	Bourque 2001 discloses “a magnetically driven rotor axially aligned with the inflow axis and” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 402 ABT-MIR-00000024 To orient the pump in the least obtrusive position...it was decided that the rotational axis of the pump’s rotor should be perpendicular to the body’s long axis. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of	No. Defendants do not specifically identify an inflow axis or an inflow tube direction. Miracor notes that, in the figures presented, the rotor axis appears to be orthogonal to what Bourque 2001 calls the “inflow cannula.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

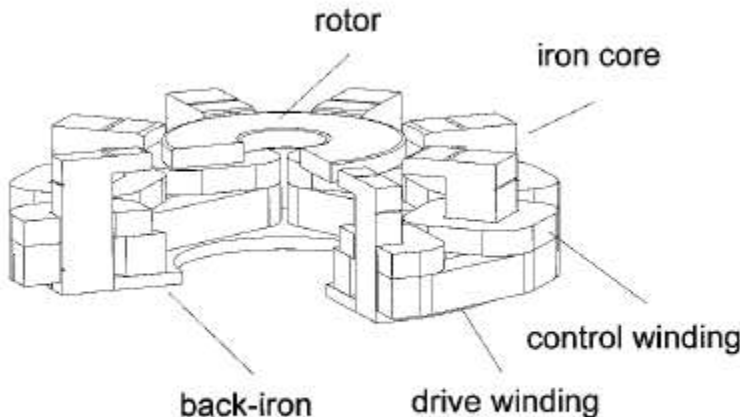
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21e] [the magnetically driven rotor] being rigidly coupled [to a first magnetic device] and	Bourque 2001 discloses “[the magnetically driven rotor] being rigidly coupled [to a first magnetic device] and” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as show in Figure 4. Bourque 2001 at page 401 ABT-MIR-00000024 a rotor that includes an impeller and passively magnetic elements;	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first magnetic device, and does not specifically identify a rigid coupling. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21f] [the magnetically driven rotor being] axially adjacent to a	Bourque 2001 discloses “[the magnetically driven rotor being] axially adjacent to a first magnetic device that is axially aligned with the inflow axis” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants do not specifically identify a first magnetic device, an inflow axis, or an inflow tube direction. Miracor notes that, in the figures

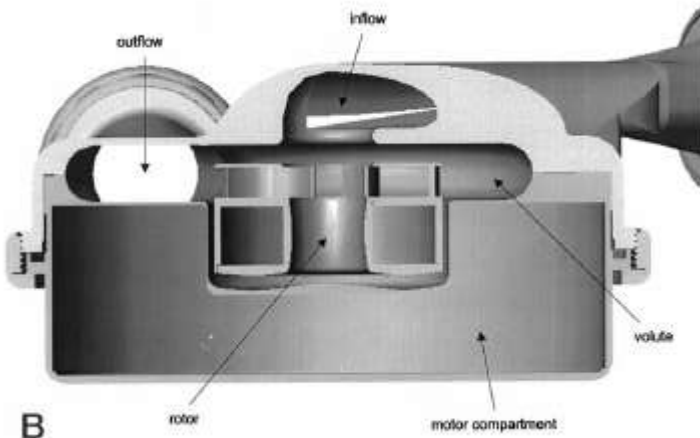
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	first magnetic device that is axially aligned with the inflow axis	Bourque 2001 at fig. 1B  Bourque 2001 at fig. 4	presented, the rotor axis appears to be orthogonal to what Bourque 2001 calls the “inflow cannula.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

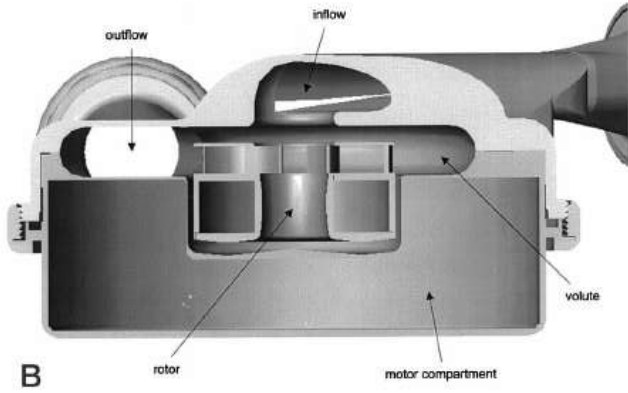
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21g] the magnetically driven rotor and first magnetic	Bourque 2001 discloses "the magnetically driven rotor and first magnetic device being rotatable about an axis of rotation aligned with the inflow axis to drive the blood flowing from the inflow tube;" at least under the apparent construction and scope of the claims as set forth in Miracor's	No. Bourque 2001 does not disclose a first magnetic device, an axis of rotation, an inflow axis or an inflow tube direction. Defendants thus do not identify

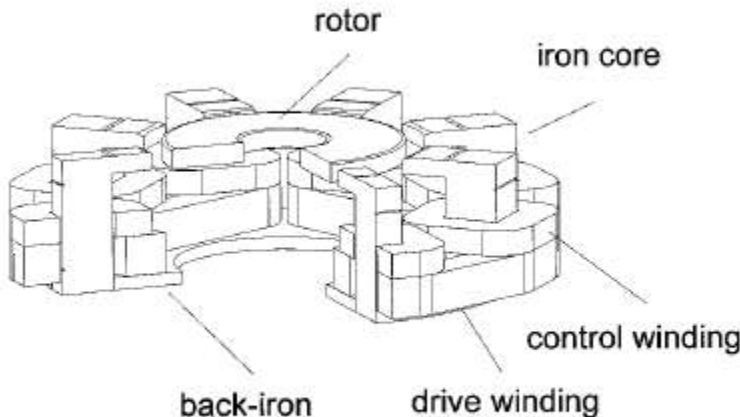
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	device being rotatable about an axis of rotation aligned with the inflow axis to drive the blood flowing from the inflow tube;	Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  The diagram shows a cross-section of a pump assembly. An inflow tube is at the top, leading into a chamber. Inside this chamber is a rotor. Below the rotor is a motor compartment. An outflow tube is on the left side. A volute is shown on the right side. The entire assembly is labeled 'B'. Bourque 2001 at fig. 4	an axis of rotation axially aligned with an inflow axis. Miracor notes that, in the figures presented, the rotor axis appears to be orthogonal to what Bourque 2001 calls the “inflow cannula.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

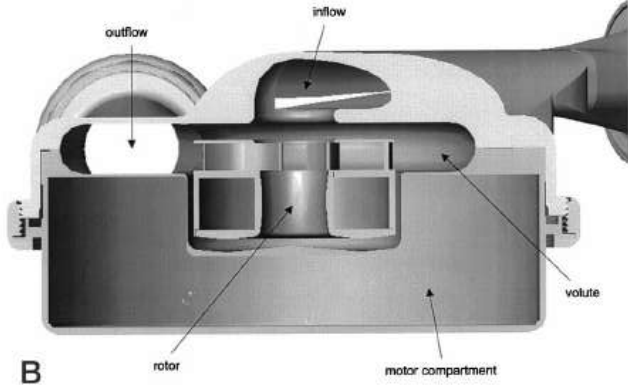
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III pump (Figures 1 and 2) comprises an upper housing that includes the inflow and outflow channels and the upper half of the volute; a lower housing that includes the lower half of the volute and a cavity for the rotor, in which the motor is enclosed; a rotor that includes an impeller and passively magnetic elements; an inflow subassembly that includes a left ventricular (LV) cannula and a section that partially decouples the position and motion of the heart from the pump and facilitates pump recovery at explant; an outflow subassembly that includes a graft for aortic anastomosis, protected from collapse by a bend-relief; an electronic cable to be exteriorized percutaneously; a screw ring to clamp together	

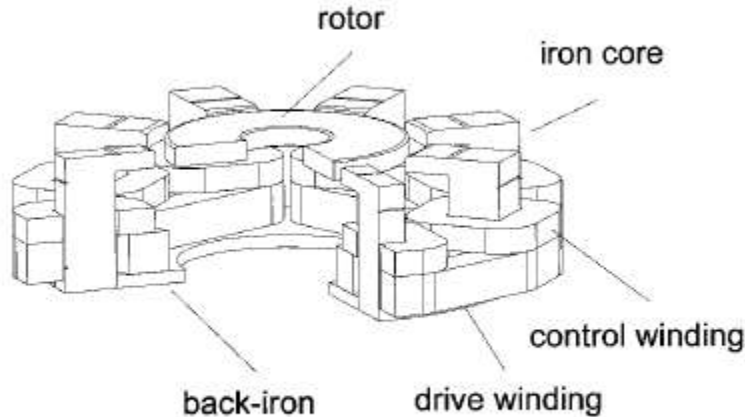
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		the upper and lower housings; and various connecting hardware, including self-locking screw rings that permit the inflow and outflow subassemblies to swivel with set resistance. The mass of the HeartMate III is 475 g, including the motor (535 g, including the inflow cannula, recovery section, outflow graft, bend relief, and all connecting hardware). The diameter and height of the puck shaped portion of the pump are 69 mm and 30 mm, respectively; the inflow and outflow protrude several millimeters outside of that. The pump displaces 175 ml. All of the wetted surfaces of the pump are titanium, except for the woven polyester grafts and the PTFE washers at joints. Most of the titanium surfaces were textured in the same way as the HeartMate and HeartMate II, described in detail elsewhere. The textured surface is intended to promote the development of a stable, adherent pseudoneointima immediately upon contact with blood, thereby insulating subsequent blood flow from contact with nonbiologic materials and reducing the risk of thromboembolism. The one component excluded from this process was the rotor, which was fabricated with smooth, polished surfaces. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21h] a magnetic	Bourque 2001 discloses "a magnetic drive system comprising a second magnetic device axially aligned with the inflow axis and" at least under	No. Defendants' bare citation in support fails to comply with

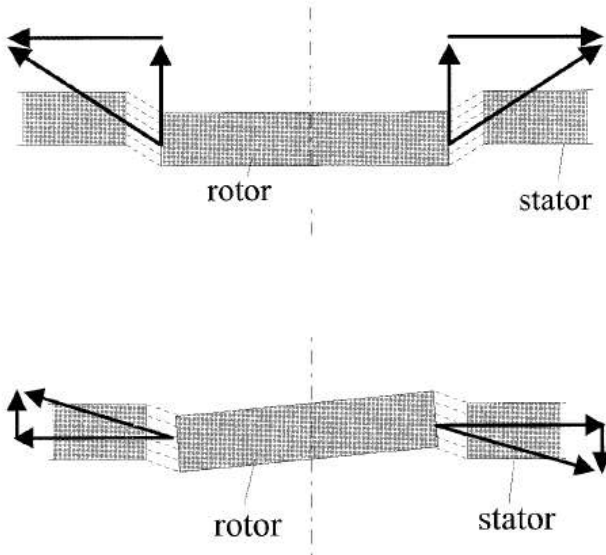
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	drive system comprising a second magnetic device axially aligned with the inflow axis and	the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	LPR 2.3(b)(3), does not specifically identify a second magnetic device, does not identify any axis of a second magnetic device, does not identify an inflow axis, and thus does not specifically identify an axially aligned position of a second magnetic device with respect to an inflow axis as recited in the claim. Miracor notes that the portion of Bourque 2001's Fig. 1B labeled as "inflow" appears to be orthogonal to Bourque 2001's motor. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
	[21i] [the second	Bourque 2001 discloses "[the second magnetic device] spaced apart from the magnetically driven rotor such that a wall of the one or more walls	Defendants thus fail to specifically disclose the relative

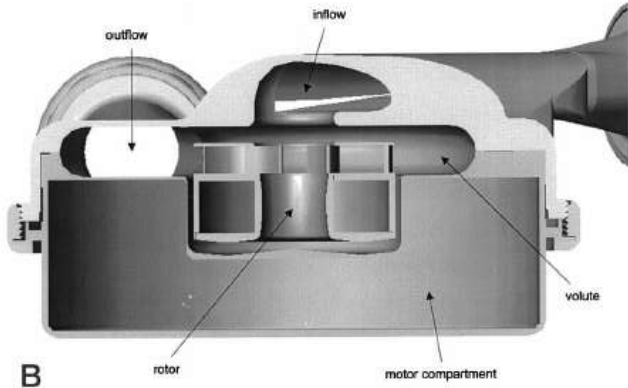
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	magnetic device] spaced apart from the magnetically driven rotor such that a wall of the one or more walls defining the chamber is positioned between the magnetically driven rotor and the second magnetic device,	defining the chamber is positioned between the magnetically driven rotor and the second magnetic device,” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at fig. 4	positions of a wall, a magnetically driven rotor, and a second magnetic device. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

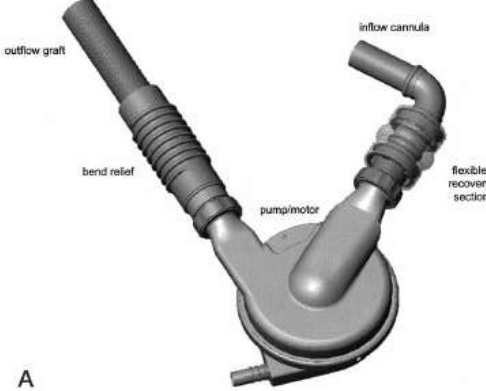
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		 Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21j] the second magnetic device positioned	Bourque 2001 discloses "the second magnetic device positioned axially closer to the first magnetic device than to the magnetically driven rotor" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a second magnetic device, a first

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	axially closer to the first magnetic device than to the magnetically driven rotor	Bourque 2001 at fig. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	magnetic device, or relative positions of the first and second magnetic devices and a magnetically driven rotor. Accordingly, Defendants fail to disclose a second magnetic device "positioned axially closer to the first magnetic device than to the magnetically driven rotor." Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
	[21k] so as to [have the second magnetic device] magnetically drive rotation of the	Bourque 2001 discloses "so as to [have the second magnetic device] magnetically drive rotation of the magnetically driven rotor within the chamber via a magneto coupling with the first magnetic device; and" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 402-403 ABT-MIR-00000024	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a first or a second magnetic device or one or more walls. Accordingly, Defendants fail to identify driving "the magnetically driven

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	magnetically driven rotor within the chamber via a magneto coupling with the first magnetic device; and	The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure.	rotor assembly within the chamber via a magneto coupling with the first magnetic device.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 5  Figure 5. Passive magnetic levitation. Above, Restoration force when axially displaced. Below, Restoration force when tilted. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[211] a blood outflow port positioned radially outward of the magnetically driven rotor such that the blood driven by the magnetically driven rotor exits the chamber in a direction transverse to the inflow axis,	Bourque 2001 discloses “a blood outflow port positioned radially outward of the magnetically driven rotor such that the blood driven by the magnetically driven rotor exits the chamber in a direction transverse to the inflow axis,” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B 	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify a direction of blood exiting the housing or a direction of the inflow tube or an inflow axis—as a result, there is no indication that the “blood driven by the magnetically driven rotor exits the chamber in a direction substantially perpendicular to the inflow axis.” Miracor notes that, to the extent the relevant directions can be estimated, blood exiting through the outflow appears to be flowing substantially parallel to the portion labeled as “inflow cannula” in Bourque 2001’s Fig. 1A. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 1A  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21m] wherein the magneto coupling orients the magnetically driven rotor	Bourque 2001 discloses “wherein the magneto coupling orients the magnetically driven rotor and the first magnetic device remain spaced apart from the one or more walls by the blood in response to rotation of the magnetically driven rotor; and” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first magnetic device or any gap sizing, and thus does not specifically identify the first

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	and the first magnetic device remain spaced apart from the one or more walls by the blood in response to rotation of the magnetically driven rotor; and	Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. Bourque 2001 at page 402 ABT-MIR-00000024 By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. However, both of these backflows consume hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces. Backflow clearances were further constrained by the stiffness of the magnetic suspension (passive in the axial direction, actively controlled in the radial direction), which describes the levitation system's capacity to counteract imposed deviations of rotor position; the gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. Bourque 2001 at page 402 ABT-MIR-00000024	magnetic device being “spaced apart from the one or more walls by the blood.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

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#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		The pump components were designed to achieve the desired flow paths, accommodate the motor, and provide convenient reliable connections in the simplest, most cost effective way. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[21n] an external control unit configured to control operation of the second magnetic device based on a control value indicative of a defined cardiac output,	Bourque 2001 discloses "an external control unit configured to control operation of the second magnetic device based on a control value indicative of a defined cardiac output," at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 403 ABT-MIR-00000024 The electronics for power and control of the LVAD and for data acquisition resided on a shelf and alongside the cages containing the calves. The animals were continuously monitored for general welfare, and certain parameters such as arterial pressure, pump and pulmonary artery volume flow rates, pump speed, and blood chemistry (including plasma free hemoglobin) were periodically recorded. In two animals, measurement of pressure head throughout the duration of the studies were made with flocked carotid lines and fluid filled LV catheters.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not identify a second magnetic device, and does not specifically identify any control of a second magnetic device by the shelf mounted electronics. Defendants do not indicate any fixed control value indicative of cardiac output. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

Bourque 2001 at fig. 3.

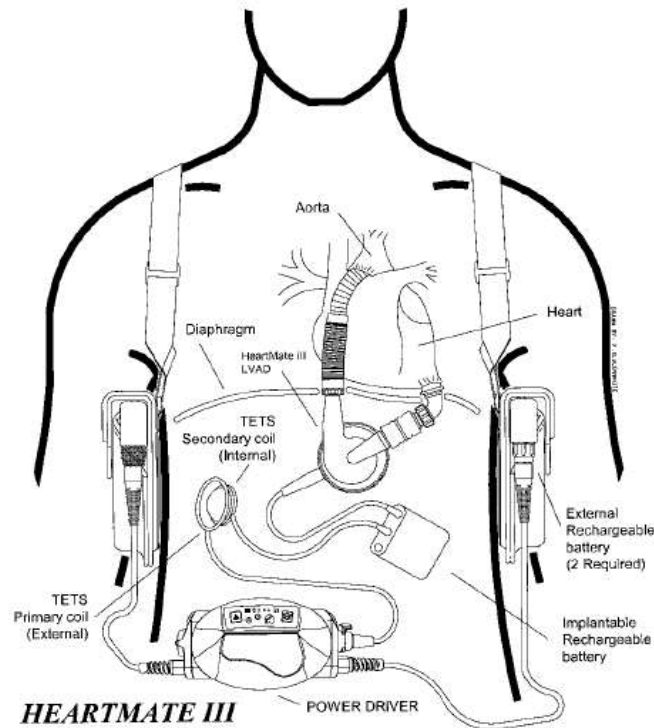


Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	[21o] wherein the external control unit is connectable to the heart assist pump device for controlling the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device.	Bourque 2001 discloses “wherein the external control unit is connectable to the heart assist pump device for controlling the second magnetic device to thereby magnetically drive the rotation of the magnetically driven rotor via the magneto coupling with the first magnetic device” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 403 ABT-MIR-00000024 The electronics for power and control of the LVAD and for data acquisition resided on a shelf and alongside the cages containing the calves. The animals were continuously monitored for general welfare, and certain parameters such as arterial pressure, pump and pulmonary artery volume flow rates, pump speed, and blood chemistry (including plasma free hemoglobin) were periodically recorded. In two animals, measurement of pressure head throughout the duration of the studies were made with flocked carotid lines and fluid filled LV catheters.	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first or second magnetic device or magneto coupling as discussed above, and does not specifically identify any controlling of the second magnetic device by the shelf mounted electronics. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

Bourque 2001 at fig. 3.

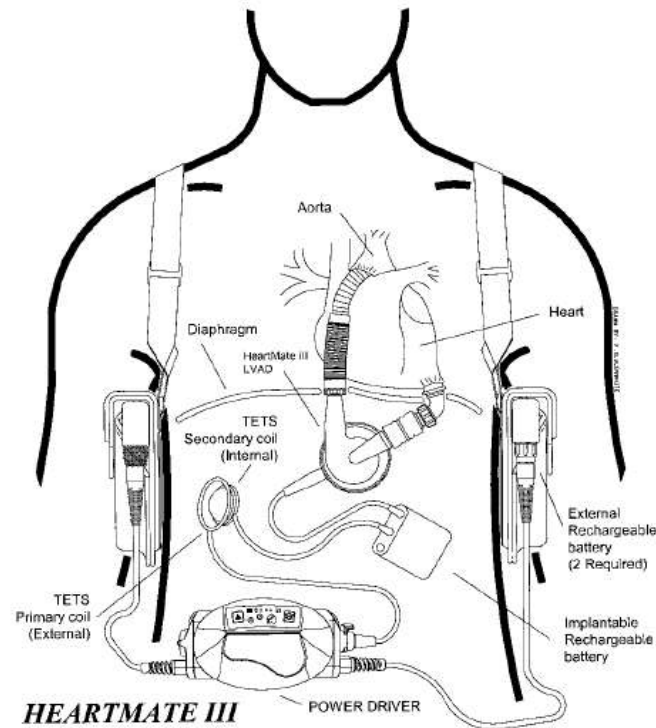
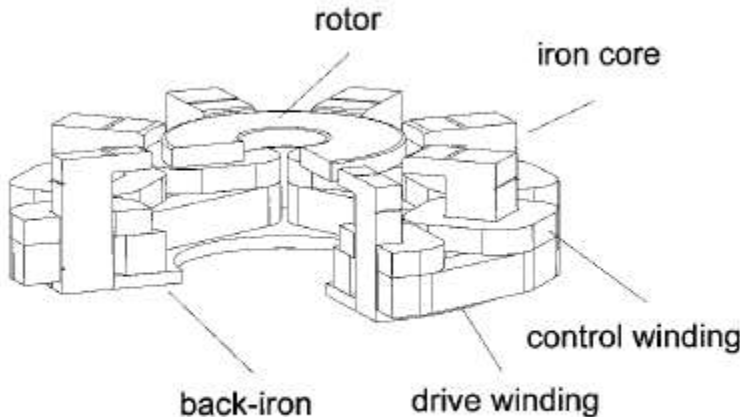


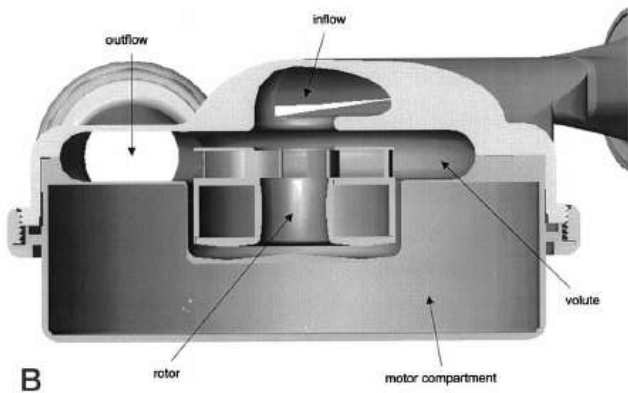
Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system.

To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
22	The system of claim 21, wherein the magnetically driven rotor includes a guide surface to produce centrifugal flow components.	Bourque 2001 discloses “The system of claim 21, wherein the magnetically driven rotor includes a guide surface to produce centrifugal flow components” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 A long-term, compact left ventricular assist device (LVAD), the HeartMate III, has been designed and fabricated, featuring a centrifugal pump with a magnetically levitated rotor. Bourque 2001 at page 402 ABT-MIR-00000024 An opening in the shroud (<i>i.e.</i>, the cover across the top of the blades on the rotor) permits fluid leaving the inflow conduit to enter the impeller. This results in a backflow path from the trailing edges of the blades (where the pressure is relatively high), over the shroud, and back to the leading edges of the blades. By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor.	Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not specifically identify any centrifugal flow components or any guide surfaces that produce centrifugal flow components. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

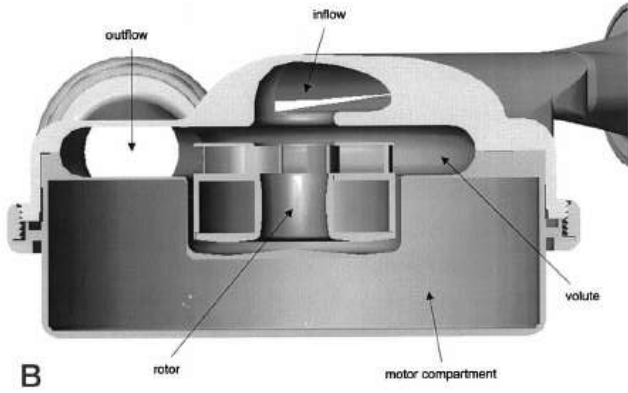
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
24 ⁵	[24a] The system of claim 21,	Bourque 2001 discloses "The system of claim 21, wherein the one or more walls and the magnetically driven rotor define a gap separating the magnetically driven rotor from the one or more walls," at least under the	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not

⁵ Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

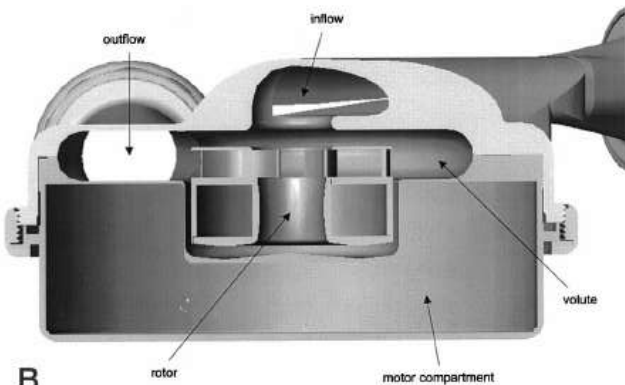
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	wherein the one or more walls and the magnetically driven rotor define a gap separating the magnetically driven rotor from the one or more walls,	apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom.	specifically identify any walls or any gap sizing, and thus does not specifically identify the rotor being spaced apart by “a gap separating the magnetically driven rotor from the one or more walls.” Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at page 402 ABT-MIR-00000024 By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. However, both of these backflows consume hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces... [T]he gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[24b] the gap configured to be occupied by the blood when the second magnetic device drives the rotation of the	Bourque 2001 discloses "the gap configured to be occupied by the blood when the second magnetic device drives the rotation of the magnetically driven rotor." at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 402 ABT-MIR-00000024 By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. However, both of these backflows consume	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a second magnetic device or a gap "configured to be occupied by blood." Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

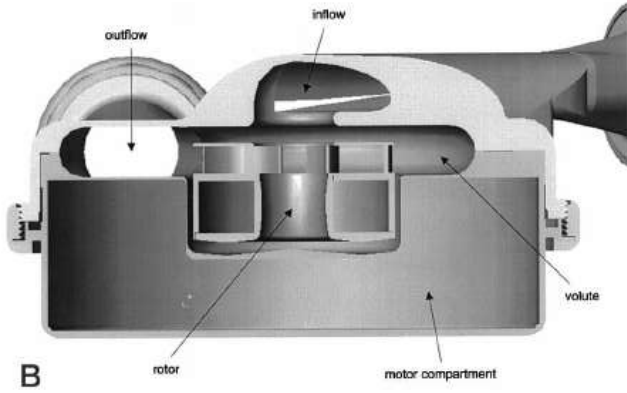
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	magnetically driven rotor.	hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces... [T]he gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
26	The system of claim 24, wherein at least part of the gap extends along radially outward from the magnetically driven rotor.	Bourque 2001 discloses "The system of claim 24, wherein at least part of the gap extends along radially outward from the magnetically driven rotor" at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. See analysis of 24. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify the gap as recited above and does not specifically identify any gap that extends in the recited direction. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

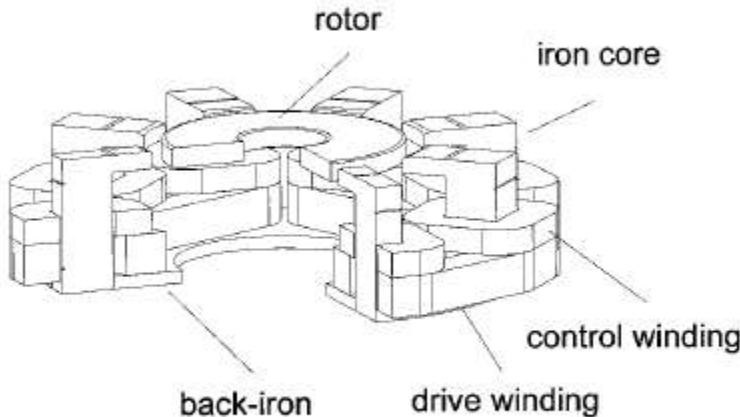
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
28 ⁶	[28a] The system of claim 21, wherein the chamber is a first chamber within which the magnetically driven rotor is positioned	Bourque 2001 discloses “The system of claim 21, wherein the chamber is a first chamber within which the magnetically driven rotor is positioned” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at fig. 1B  Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as show in Figure 4. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III pump...comprises an <i>upper housing</i> that includes the inflow and outflow channels and the upper half of the volute; a <i>lower housing</i> that includes the lower half of the volute and a cavity for the	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a chamber or a first chamber. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

⁶ Miracor does not assert this claim in its LPR 2.2 Initial Infringement Contentions, but certain asserted claims depend from this claim.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		rotor, in which the motor is enclosed; <i>a rotor</i> that includes an impeller and passively magnetic elements... To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
	[28b] and the magnetic drive system is positioned within a second chamber sealed from the first chamber.	Bourque 2001 discloses “and the magnetic drive system is positioned within a second chamber sealed from the first chamber” at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at figs. 1B 	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a second chamber or a seal between a first chamber and a second chamber. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references (e.g., Schob '618 Ex. E-5) identified in the cover pleading of Defendants' Initial Invalidity Contentions. For example, a person of ordinary skill in the art would know that if a magnet comes into contact with blood, it can adversely affect the blood so as to become toxic or lethal, or cause corrosion, and that therefore the magnet must be sealed from the blood. Further, a person of ordinary skill in the art would have been motivated to combine Bourque 2001 with one or more other references identified in the cover pleading of Defendants' Initial Invalidity Contentions (e.g., Schob '618 Ex. E-5) with a reasonable expectation of success because each of these references contains familiar elements within the similar fields of endeavor to address similar known problems according to known methods which would yield predictable results.	

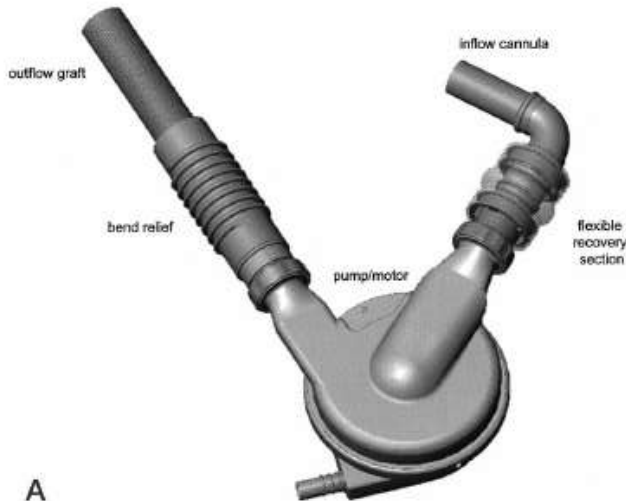
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
29	The system of claim 28, wherein the wall of the one or more walls separates the first chamber from the second chamber.	Bourque 2001 discloses “The system of claim 28, wherein the wall of the one or more walls separates the first chamber from the second chamber.” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at figs. 1B  To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants’ Initial Invalidity Contentions.	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a first chamber, a second chamber, or one or more walls. Accordingly, Defendants identify no wall that separates a first chamber from a second chamber. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.
30	The system of claim 21, wherein the	Bourque 2001 discloses “The system of claim 21, wherein the first magnetic device comprises a permanent magnet” at least under the apparent construction and scope of the claims as set forth in Miracor’s	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not

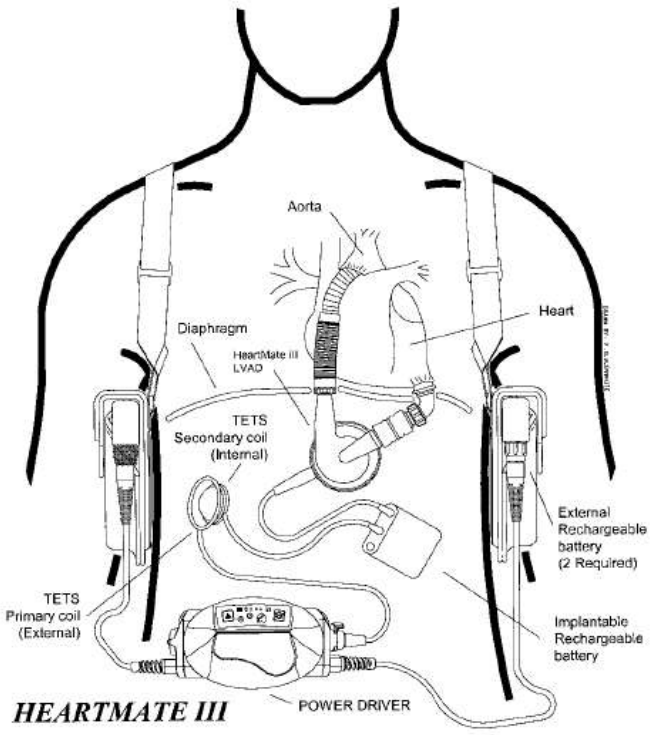
U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	first magnetic device comprises a permanent magnet.	Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as show in Figure 4. Bourque 2001 at page 401 ABT-MIR-00000024 a rotor that includes an impeller and passively magnetic elements; Bourque 2001 at fig. 4  Figure 4. HeartMate III motor, drive, and levitation (control) in a single magnetic structure.	specifically identify a first magnetic device. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
32	The system of claim 21, wherein both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap during rotation of the magnetically driven rotor.	Bourque 2001 discloses "The system of claim 21, wherein both the magnetically driven rotor and first magnetic device are entirely spaced apart from the surrounding rotor housing by a gap during rotation of the magnetically driven rotor." at least under the apparent construction and scope of the claims as set forth in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 401 ABT-MIR-00000024 The rotor is magnetically suspended, eliminating contact between moving parts and consequently extending wear life indefinitely. It is anticipated that this design will profoundly increase reliability. Bourque 2001 at page 402-403 ABT-MIR-00000024 The HeartMate III motor includes drive and levitation in a single magnetic structure as shown in Figure 4. The rotor is passively magnetically levitated in the axial-translational and transverse-rotational degrees of freedom (Figure 5) and actively magnetically levitated in the remaining degrees of freedom. Bourque 2001 at page 402 ABT-MIR-00000024	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3), does not specifically identify a relative position of a housing, does not specifically identify any gap sizing, and thus does not specifically identify the first magnetic device being spaced apart from a surrounding rotor housing by a gap. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		By creating a similar opening in the lower half of the rotor, a second backflow path underneath the rotor results, eliminating what would have been an accumulation of stagnant blood there, and relieving the upward thrust load on the rotor. However, both of these backflows consume hydraulic power without contributing to physiologic perfusion. Thus, the clearances above and below the rotor were chosen to balance reduced hydraulic efficiency with sufficient washing of blood contacting surfaces. Backflow clearances were further constrained by the stiffness of the magnetic suspension (passive in the axial direction, actively controlled in the radial direction), which describes the levitation system's capacity to counteract imposed deviations of rotor position; the gaps permit up to 7X gravitational loads in any direction without contact between the rotor and housing. Bourque 2001 at page 402 ABT-MIR-00000024 The pump components were designed to achieve the desired flow paths, accommodate the motor, and provide convenient reliable connections in the simplest, most cost effective way. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	
33	The system of claim 21, further	Bourque 2001 discloses "The system of claim 21, further comprising one or more sensors that deliver feedback signals to the external control unit" at least under the apparent construction and scope of the claims as set forth	No. Defendants' bare citation in support fails to comply with LPR 2.3(b)(3) and does not

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
	comprising one or more sensors that deliver feedback signals to the external control unit.	in Miracor's Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at page 403 ABT-MIR-00000024 Speed and motor parameters were set and controlled using software specifically designed to develop the HeartMate III. All measurements were automatically processed and recorded using Labview. Bourque 2001 at page 403 ABT-MIR-00000024 The electronics for power and control of the LVAD and for data acquisition resided on a shelf and alongside the cages containing the calves. The animals were continuously monitored for general welfare, and certain parameters such as arterial pressure, pump and pulmonary artery volume flow rates, pump speed, and blood chemistry (including plasma free hemoglobin) were periodically recorded. In two animals, measurement of pressure head throughout the duration of the studies were made with flocked carotid lines and fluid filled LV catheters. The pump was prescribed to run at 3,500 rpm perioperatively, then gradually adjusted to maintain volume flow rates at 5 ± 1 L/min throughout the study. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	specifically identify feedback signals delivered to an external control unit. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
35	The system of claim 21, wherein heart assist pump device is a catheter device.	Bourque 2001 discloses “The system of claim 21, wherein heart assist pump device is a catheter device” at least under the apparent construction and scope of the claims as set forth in Miracor’s Initial Infringement Contentions and to the extent the asserted claims are found to be not indefinite. Bourque 2001 at 401 ABT-MIR-00000024 The HeartMate III pump...comprises an upper housing that includes the inflow and outflow channels and the upper half of the volute;...an inflow subassembly that includes a left ventricular (LV) cannula and a section that partially decouples the position and motion of the heart from the pump and facilitates pump recovery at explant. Bourque 2001 at fig. 1A 	No. Defendants’ bare citation in support fails to comply with LPR 2.3(b)(3) and does not identify the system of claim 21, for the reasons discussed with respect to claim 21 above. Miracor may modify its response to this claim element subject to further explanation or definition by Defendants.

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		Bourque 2001 at fig. 3.  HEARTMATE III Figure 3. HeartMate III LVAD implanted configuration. TETS, transcutaneous energy transmission system. To the extent it is found that Bourque 2001 does not expressly disclose this limitation, the limitation is inherent. And to the extent it is found that Bourque 2001 does not anticipate this claim, Bourque 2001 renders it	

U.S. Patent No. 11,674,517			
#	Claim Element	Bourque 2001	Miracor's Response as to Whether the Element is Present in the Reference
		obvious, standing alone, in combination with the knowledge of a person of ordinary skill in the art, and/or in combination with one or more other prior art references identified in the cover pleading of Defendants' Initial Invalidity Contentions.	