

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ALLEN MEDICAL SYSTEMS, INC. AND)	
HILL-ROM SERVICES, INC.,)	
)	
Plaintiffs,)	
)	C.A. No. _____
v.)	
)	JURY TRIAL DEMANDED
MIZUHO ORTHOPEDIC SYSTEMS, INC.)	
D/B/A MIZUHO OSI,)	
)	
Defendant.)	
)	

COMPLAINT

Plaintiffs Allen Medical Systems, Inc. (“Allen Medical”) and Hill-Rom Services, Inc. (“Hill-Rom Services”) (collectively “Plaintiffs”), by and through their undersigned counsel, hereby file this Complaint against Defendant Mizuho Orthopedic Systems, Inc. d/b/a Mizuho OSI (“Mizuho”), and allege as follows:

NATURE OF ACTION

1. This action for patent infringement, brought under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, seeks relief arising out of Mizuho’s infringement of U.S. Patent Nos. 9,968,503 (the “’503 Patent”), 8,397,323 (the “’323 Patent”), RE41,412 (the “’412 Patent”), 10,561,552 (the “’552 Patent”), 9,849,051 (the “’051 Patent”), 8,341,777 (the “’777 Patent”), and 6,708,358 (the “’358 Patent”) (collectively the “Patents-in-Suit”).

THE PARTIES

2. Allen Medical is a corporation organized and existing under the laws of the State of Indiana, with its principal place of business located at 130 East Randolph Street, Suite 1000, Chicago, Illinois.

3. Hill-Rom Services is a corporation organized and existing under the laws of the State of Indiana, with its principal place of business located at 130 East Randolph Street, Suite 1000, Chicago, Illinois.

4. Allen Medical and Hill-Rom Services are both wholly owned subsidiaries of non-party Hill-Rom, Inc., which is a wholly owned subsidiary of non-party Hill-Rom Holdings, Inc., a publicly traded company.

5. Allen Medical is the owner of the '503, '323, and '412 Patents, and Hill-Rom Services is the owner of the '552, '051, '777, and '358 Patents.

6. Upon information and belief, Mizuho is a corporation organized and existing under the laws of the State of Delaware with its principal place of business located at 30031 Ahern Avenue, Union City, California 94587.

JURISDICTION AND VENUE

7. This Court has subject matter jurisdiction over the asserted claims as set forth herein pursuant to 28 U.S.C. §§ 1331 and 1338, and 35 U.S.C. § 281.

8. This Court has personal jurisdiction over Mizuho because it is a Delaware corporation, because Mizuho has designated an agent in Delaware for service of process, and/or because Mizuho has been conducting and/or is presently conducting business in the District of Delaware on a regular basis.

9. In addition, this Court has personal jurisdiction over Mizuho because, upon information and belief, Mizuho has actively engaged in acts that have infringed and will infringe the claims of the Patents-in-Suit in the District of Delaware.

10. Venue is proper in this District pursuant to 28 U.S.C. § 1400 for at least the reason that Mizuho is incorporated in Delaware, and therefore resides in Delaware for the purposes of the statute.

FACTUAL ALLEGATIONS

Background

11. Plaintiffs and their affiliates are worldwide leaders in the design and manufacture of medical products and invest a substantial amount of capital in product development and improvement to maintain their position as leading providers of innovative and life-saving products. As a result of these investments, Plaintiffs and their affiliates have thousands of issued patents, including the Patents-in-Suit.

12. Upon information and belief, Mizuho uses, imports, offers for sale, and/or sells the Accused Products (as defined below) in Delaware and elsewhere in the United States. Such use, importation, offers for sale, and/or sale of the Accused Products (as defined below) is in direct competition with products sold by Plaintiffs and their affiliates.

Patents-in-Suit

The '503 Patent

13. The '503 Patent was filed on April 29, 2015 and issued on May 15, 2018. The '503 Patent is attached hereto as Exhibit A.

14. The '503 Patent claims priority to three provisional patent applications filed on April 16, 2012 (No. 61/624,626), May 16, 2012 (No. 61/647,950), and September 20, 2012 (No. 61/703,561).

15. Allen Medical is the owner, by valid assignment, of the entire right, title and interest in and to the '503 Patent.

16. This '503 Patent, entitled "Dual Column Surgical Table Having a Single-handle Unlock for Table Rotation," discloses and claims a novel patient support apparatus.

17. Claim 1 of the '503 Patent claims: "A surgical patient support apparatus comprising: a foundation frame including a rotation driver, a drive shaft, and a drive coupler, and a support top coupled to the drive shaft of the foundation frame to rotate with the drive shaft, the support top configured to rotate about a top axis extending along the length of the support top relative to the foundation frame, wherein the drive coupler is configured to move between an engaged position, coupling the drive shaft to the rotation driver so that the support top is rotated about the top axis, and a disengaged position, de-coupling the drive shaft from the rotation drive so that the support top is free to be manually rotated about the top axis, wherein the drive coupler includes a first engagement member that extends through the rotation driver and into the drive shaft when the drive coupler is in the engaged position."

The '323 Patent

18. The '323 Patent was filed on August 22, 2008 and issued on March 19, 2013. The '323 Patent is attached hereto as Exhibit B.

19. The '323 Patent claims priority to two provisional patent applications filed on June 25, 2008 (No. 61/075,381) and August 24, 2007 (No. 60/957,882).

20. Allen Medical is the owner, by valid assignment, of the entire right, title and interest in and to the '323 Patent.

21. The '323 Patent, entitled "Surgical Table Accessory Platform," discloses and claims a novel patient support apparatus.

22. Claim 1 of the '323 Patent claims: "A patient-support apparatus comprising a cantilevered support including a first radiolucent beam having a longitudinal axis, a second radiolucent beam having a longitudinal axis, the longitudinal axis of the second beam oriented generally parallel to the longitudinal axis of the first beam, the first and second beams configured

to support a patient-support accessory, and means for coupling the cantilevered support to a deck of a surgical table such that substantially all of the load borne by the patient-support accessory is transferred through the beams directly to the deck, the patient-support apparatus further including (i) a first cross-beam coupled to a first end of the first and second radiolucent beams and (ii) a second cross-beam spaced apart from the first cross-beam and coupled to the first and second radiolucent beams, the first and second radiolucent beams and the first and second cross-beams being substantially coplanar.”

The '412 Patent

23. The '412 Patent is a reissue of U.S. Patent No. 5,802,641, which issued on September 8, 1998.

24. The reissue application for the '412 Patent was filed on September 7, 2000 and the patent reissued on July 6, 2010. The '412 Patent is attached hereto as Exhibit C.

25. Allen Medical is the owner, by valid assignment, of the entire right, title and interest in and to the '412 Patent.

26. The '412 Patent, entitled “Leg Holder System for Simultaneous Positioning in the Abduction and Lithotomy Dimensions,” discloses and claims a novel patient support apparatus, including an improved leg holder system.

27. Claim 1 of the '412 Patent claims: “A leg holder system for simultaneous positioning in an abduction dimension and a lithotomy dimension comprising: a support device, having a longitudinal axis, for supporting a leg cradle; a clamping device for mounting a proximate end of said support device to a mounting device having a first axis transverse to said longitudinal axis and selectively simultaneously clamping and releasing motion of said support device about said first axis and about a second axis transverse to both said first axis and said longitudinal axis, said

support device fixed in said clamping device from rotation about said longitudinal axis; an actuator device for actuating said clamping device to simultaneously selectively clamp and release said support device and said mounting device; and an operator device remote from said clamping device and said actuator device for operating said actuator device to enable said support device to move jointly about both said first and said second axes in the abduction and lithotomy dimensions.”

The '552 Patent

28. The '552 Patent was filed on December 19, 2017 and issued on February 18, 2020. The '552 Patent is attached hereto as Exhibit D.

29. The '552 Patent claims priority to two provisional patent applications filed on October 24, 2007 (No. 60/982,300) and March 30, 2007 (No. 60/921,192).

30. Hill-Rom Services is the owner, by valid assignment, of the entire right, title and interest in and to the '552 Patent.

31. The '552 Patent, entitled “User Interface for Hospital Bed,” discloses and claims a novel patient support apparatus with an improved user-interface module.

32. Claim 1 of the '552 Patent claims: “A patient support apparatus, comprising: a support surface, a user module operably coupled to the support surface, a display operably coupled to the user module, the display being configured to graphically display a graphical depiction of a person positioned on the support surface responsive to a selection made by a user relating to an alarm function of the patient support apparatus, wherein the display is further configured to substantially simultaneously display current data relating to the alarm function and current data relating to at least one therapy function of the patient support apparatus.”

The '051 Patent

33. The '051 Patent was filed on March 21, 2016 and issued on December 26, 2017. The '051 Patent is attached hereto as Exhibit E.

34. The '051 Patent claims priority to two provisional patent applications filed on October 24, 2007 (No. 60/982,300) and March 30, 2007 (No. 60/921,192).

35. Hill-Rom Services is the owner, by valid assignment, of the entire right, title and interest in and to the '051 Patent.

36. The '051 Patent, entitled "User Interface for Hospital Bed," discloses and claims a novel patient support apparatus with an improved user-interface module.

37. Claim 1 of the '051 Patent claims: "A user module for a patient support, the user module comprising a communication interface configured to communicate signals from the user module to the patient support, the patient support having at least one automated function and being configured to support a patient in at least a substantially horizontal position, the communication interface further configured to communicate signals from the patient support to the user module, an input device configured to receive a signal indicative of a selection made by a user relating to an automated function of the patient support, and an output device including a visual display configured to simultaneously display a first graphical depiction of a person positioned on the patient support responsive to a selection made by a user relating to a first alarm function of the patient support, and a second graphical depiction of a person positioned on the patient support responsive to a selection made by a user relating to a second alarm function of the patient support, wherein the first graphical depiction includes a first animated element indicative of movement associated with operation of the first alarm function of the patient support and the second graphical

depiction includes a second animated element indicative of movement associated with operation of the second alarm function of the patient support.”

The '777 Patent

38. The '777 Patent was filed on January 31, 2012 and issued on January 1, 2013. The '777 Patent is attached hereto as Exhibit F.

39. The '777 Patent claims priority to a provisional patent application filed on May 21, 2003 (No. 60/472,260).

40. Hill-Rom Services is the owner, by valid assignment, of the entire right, title and interest in and to the '777 Patent.

41. The '777 Patent, entitled “Hospital Bed Having Caster Braking Alarm,” discloses and claims a novel patient support apparatus.

42. Claim 18 of the '777 Patent claims: “A patient support adapted to be connected to an external power source, the patient support comprising a bedframe supported on a floor, a plurality of wheels coupled to the bedframe, a brake configured to prevent the bedframe from moving on the floor, the brake being moveable between a braked position and an unbraked position, a controller configured to activate an alarm when the brake is moved to the unbraked position when the patient support is connected to the external power source, and a battery enable switch that allows a caregiver to operate electrically controlled functions of the patient support using battery power when the patient support is disconnected from the external power source, wherein the bedframe includes a siderail and the battery enable switch is mounted to the siderail.”

The '358 Patent

43. The '358 Patent was filed on December 29, 2000 and issued on March 23, 2004. The '358 Patent is attached hereto as Exhibit G.

44. The '358 Patent claims priority to U.S. Patent Application No. 09/064,292, filed on April 22, 1998.

45. Hill-Rom Services is the owner, by valid assignment, of the entire right, title and interest in and to the '358 Patent.

46. The '358 Patent, entitled "Articulating Bed Frame," discloses and claims a novel user module for a patient support apparatus.

47. Claim 1 of the '358 Patent claims: "A bed assembly comprising: a) a base, b) a frame supported by the base, c) a deck supported by the frame, the deck having a generally upwardly-facing top surface formed to include an opening, and d) a unit received by the opening so that the unit is accessible from the top surface of the deck, further comprising a mattress pad defining an opening, at least a portion of the opening of the mattress pad being coextensive with at least a portion of the opening of the deck so that the unit is accessible through the mattress pad and the deck."

Patents-in-Suit Collectively

48. Plaintiffs have, to the best of their present knowledge, complied with the marking provisions set forth in 35 U.S.C. § 287 with respect to the Patents-in-Suit.

49. Plaintiffs have not licensed Mizuho to practice the Patents-in-Suit, and Mizuho has no right or authority to license others to practice the Patents-in-Suit.

The Accused Products

50. Plaintiffs Allen Medical and Hill-Rom Services assert infringement of the Patents-in-Suits against Mizuho for its unauthorized making, using, offering to sell, selling, and/or importing the Trios[®] Surgical Table System and accessories (the '503, '552, '051, and '777 Patents), the ProAxis[®] Spinal Surgery Tables and accessories (the '552, '051, and '777 Patents), the Insite[®]

Surgery Tables and accessories (the '323 Patent), and the Hana[®] Surgery Tables and accessories (the '412 and '358 Patents) (collectively the “Accused Products”).

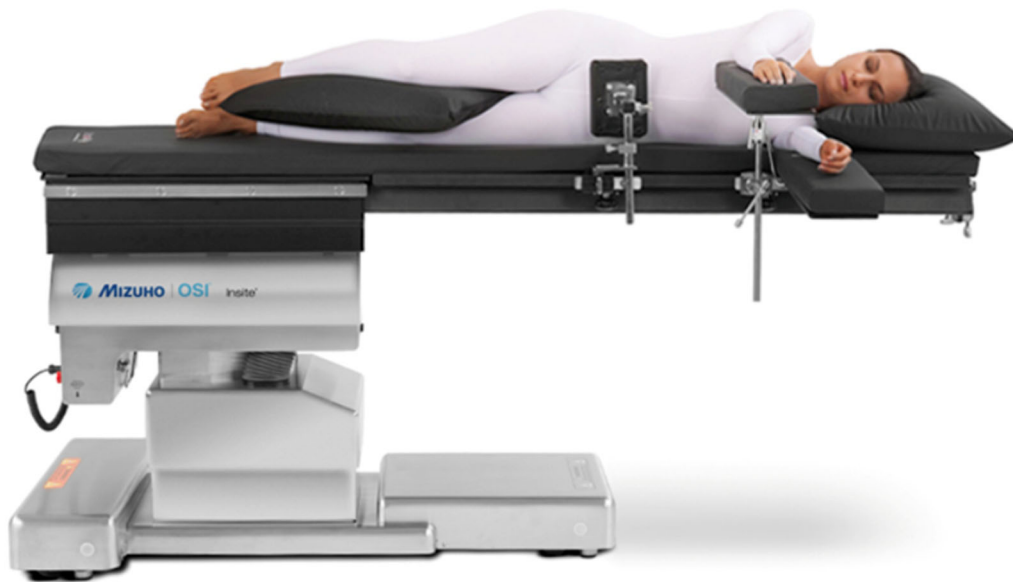
51. Mizuho describes the Trios[®] Surgical Table System on its website as its “latest modular table platform, offering enhanced safety features, improved setup workflows, and increased weight capacity,” and lists numerous accessories and other components sold with and/or used with the product. <https://www.mizuhosi.com/product/trios/>; see also Exhibits O and P. An exemplary image of a Trios[®] Surgical Table System is shown below, along with an exemplary image of a IntelliPendant[®] user interface that is part of the system.



52. Mizuho describes the ProAxis[®] Spinal Surgery Table on its website as a surgical table that “features advanced hinge technology to provide unparalleled surgical access, precision and flexibility,” and lists numerous accessories and other components sold with and/or used with the product. <https://www.mizuhosi.com/product/proaxis/>; see also Exhibits Q and R. An exemplary image of a ProAxis[®] Spinal Surgery Table is shown below, along with an exemplary image of the IntelliPendant[®] user interface that is part of the table.



53. Mizuho describes the Insite[®] Surgery Table on its website as “a flexible and radiolucent cantilevered surgery table useful for many spine and imaging procedures,” and lists numerous accessories and other components sold with and/or used with the product. <https://www.mizuho.com/product/insite/>; *see also* Exhibit S. An exemplary image of an Insite[®] Surgery Table is shown below.



54. Mizuho describes the Hana[®] Orthopedic Surgery Table on its website as a surgical table that is “the gold standard for patient positioning in fracture and hip procedures, the Hana is revolutionizing orthopedic surgeries,” and lists numerous accessories and other components sold with and/or used with the product. <https://www.mizuho.com/product/hana/>; *see also* Exhibit T. Mizuho further describes the Hana[®] SC Surgery Center Table on its website as “everything surgeons love about the Hana table exclusively for hip arthroscopy and arthroplasty procedures,” and lists numerous accessories and other components sold with and/or used with the product. <https://www.mizuho.com/product/hana-sc/>; *see also* Exhibit T. An exemplary image of a Hana[®] Surgery Table is shown below.



COUNT I
(Infringement of the '503 Patent)

55. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

56. Mizuho has directly infringed and continues to directly infringe the '503 Patent by using, selling, offering for sale, and or importing the Trios[®] Surgical Table System and accessories in the United States, without license or authorization by Allen Medical.

57. As set forth in the claim chart attached as Exhibit H, which is incorporated herein by reference, the Trios[®] Surgical Table System includes each of the elements of at least Claim 1 of the '503 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Trios[®] Surgical Table System and accessories in the United States constitutes infringement of the '503 Patent.

58. Mizuho's infringement has caused and continues to cause Allen Medical irreparable harm and damages in an amount to be proven at trial.

59. Upon information and belief, Mizuho's unlawful infringing activity will continue unless and until Mizuho is enjoined by this Court from further infringement. Mizuho's continuing infringement since the commencement of this suit will cause Allen Medical further irreparable harm and damages.

COUNT II
(Infringement of the '323 Patent)

60. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

61. Mizuho has directly infringed and continues to directly infringe the '323 Patent by using, selling, offering for sale, and or importing the Insite[®] Surgery Tables and accessories in the United States, without license or authorization by Allen Medical.

62. As set forth in the claim chart attached as Exhibit I, which is incorporated herein by reference, the Insite[®] Surgery Tables includes each of the elements of at least Claim 1 of the '323 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Insite[®] Surgery Tables and accessories in the United States constitutes infringement of the '323 Patent.

63. Mizuho's infringement has caused and continues to cause Allen Medical irreparable harm and damages in an amount to be proven at trial.

64. Upon information and belief, Mizuho's unlawful infringing activity will continue unless and until Mizuho is enjoined by this Court from further infringement. Mizuho's continuing infringement since the commencement of this suit will cause Allen Medical further irreparable harm and damages.

COUNT III
(Infringement of the '412 Patent)

65. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

66. Mizuho has directly infringed the '412 Patent by using, selling, offering for sale, and or importing the Hana[®] Surgery Tables and accessories in the United States, without license or authorization by Allen Medical.

67. As set forth in the claim chart attached as Exhibit J, which is incorporated herein by reference, the Hana[®] Surgery Tables include each of the elements of at least Claim 1 of the '412 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Hana[®] Surgery Tables and accessories in the United States constitutes infringement of the '412 Patent.

68. Mizuho's infringement has caused Allen Medical damages in an amount to be proven at trial.

COUNT IV
(Infringement of the '552 Patent)

69. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

70. Mizuho has directly infringed and continues to directly infringe the '552 Patent by using, selling, offering for sale, and or importing the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States, without license or authorization by Hill-Rom Services.

71. As set forth in the claim chart attached as Exhibit K, which is incorporated herein by reference, the Trios[®] Surgical Table System and the ProAxis[®] Spinal Surgery Tables include each of the elements of at least Claim 1 of the '552 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States constitutes infringement of the '552 Patent.

72. Mizuho's infringement has caused and continues to cause Hill-Rom Services irreparable harm and damages in an amount to be proven at trial.

73. Upon information and belief, Mizuho's unlawful infringing activity will continue unless and until Mizuho is enjoined by this Court from further infringement. Mizuho's continuing infringement since the commencement of this suit will cause Hill-Rom Services further irreparable harm and damages.

COUNT V
(Infringement of the '051 Patent)

74. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

75. Mizuho has directly infringed and continues to directly infringe the '051 Patent by using, selling, offering for sale, and or importing the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States, without license or authorization by Hill-Rom Services.

76. As set forth in the claim chart attached as Exhibit L, which is incorporated herein by reference, the Trios[®] Surgical Table System and the ProAxis[®] Spinal Surgery Tables include each of the elements of at least Claim 1 of the '051 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States constitutes infringement of the '051 Patent.

77. Mizuho's infringement has caused and continues to cause Hill-Rom Services irreparable harm and damages in an amount to be proven at trial.

78. Upon information and belief, Mizuho's unlawful infringing activity will continue unless and until Mizuho is enjoined by this Court from further infringement. Mizuho's continuing

infringement since the commencement of this suit will cause Hill-Rom Services further irreparable harm and damages.

COUNT VI
(Infringement of the '777 Patent)

79. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

80. Mizuho has directly infringed and continues to directly infringe the '777 Patent by using, selling, offering for sale, and or importing the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States, without license or authorization by Hill-Rom Services.

81. As set forth in the claim chart attached as Exhibit M, which is incorporated herein by reference, the Trios[®] Surgical Table System and the ProAxis[®] Spinal Surgery Tables include each of the elements of at least Claim 18 of the '777 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Trios[®] Surgical Table System and accessories and the ProAxis[®] Spinal Surgery Tables and accessories in the United States constitutes infringement of the '777 Patent.

82. Mizuho's infringement has caused and continues to cause Hill-Rom Services irreparable harm and damages in an amount to be proven at trial.

83. Upon information and belief, Mizuho's unlawful infringing activity will continue unless and until Mizuho is enjoined by this Court from further infringement. Mizuho's continuing infringement since the commencement of this suit will cause Hill-Rom Services further irreparable harm and damages.

COUNT VII
(Infringement of the '358 Patent)

84. Plaintiffs Allen Medical and Hill-Rom Services repeat and reassert all the foregoing allegations as if they were stated in full herein.

85. Mizuho has directly infringed the '358 Patent by using, selling, offering for sale, and or importing the Hana[®] Surgery Tables and accessories in the United States, without license or authorization by Hill-Rom Services.

86. As set forth in the claim chart attached as Exhibit N, which is incorporated herein by reference, the Hana[®] Surgery Tables include each of the elements of at least Claim 1 of the '358 Patent and Mizuho's manufacture, importation, use, offer for sale and/or sale of the Hana[®] Surgery Tables and accessories in the United States constitutes infringement of the '358 Patent.

87. Mizuho's infringement has caused Allen Medical damages in an amount to be proven at trial.

PRAYER FOR RELIEF

WHEREFORE, and expressly reserving the right to conduct discovery on the issue of willful and/or indirect infringement and seek leave to amend their Complaint as appropriate, Plaintiffs Allen Medical and Hill-Rom Services pray for judgment in their favor and against Mizuho, collectively and individually, as follows:

- A. Entry of judgment that the Mizuho has infringed one or more claims of the Patents-in-Suit;
- B. Entry of judgment that preliminarily and/or permanently enjoins the Mizuho and their representatives, assigns or successors, or any subsidiaries, parents, divisions, agents, servants, employees thereof, and/or those in privity with Mizuho from infringing the Patents-in-Suit;
- C. An award of compensatory damages for Plaintiffs Allen Medical and/or Hill-Rom Services as a result of infringement, as provided in 35 U.S.C. § 284, the extent of which will be determined at trial, which may be comprised

in whole or in part of Plaintiffs' lost profits, but in no event less than a reasonable royalty, together with interest and costs;

- D. A determination that, pursuant to 35 U.S.C. § 285, this is an exceptional case and that Plaintiffs Allen Medical and/or Hill-Rom Services be awarded their reasonable attorney's fees;
- E. An award of interest on any judgment rendered in this action;
- F. An award of Plaintiffs Allen Medical's and/or Hill-Rom Services' costs in this action; and
- G. Such other and further relief as is just and proper.

JURY DEMAND

Plaintiffs Allen Medical and Hill-Rom Services demand a trial by jury on all issues so triable.

Dated: December 10, 2021

YOUNG CONAWAY STARGATT & TAYLOR, LLP

Of Counsel:

/s/ Pilar G. Kraman

BARCLAY DAMON LLP

Pilar G. Kraman (#5199)

Douglas J. Nash
John D. Cook
Genevieve M. Halpenny (#6738)
Barclay Damon Tower
125 East Jefferson Street
Syracuse, New York 13202
(315) 425-2700
dnash@barclaydamon.com
jcook@barclaydamon.com
ghalpenny@barclaydamon.com

Rodney Square
1000 North King Street
Wilmington, Delaware 19801
(302) 571-6600
pkraman@ycst.com

*Attorneys for Allen Medical Systems, Inc.
and Hill-Rom Services, Inc.*

Naresh K. Kannan
80 State Street
Albany, NY 12207
(518) 429-4200
nkannan@barclaydamon.com