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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ASETEK DANMARK A/S,
Plaintiff,
v.
COOLIT SYSTEMS INC,
Defendant.

Case No. [19-cv-00410-EMC](#)

CLAIM CONSTRUCTION ORDER

I. INTRODUCTION

Plaintiff Asetek Danmark A/S (“Asetek”) filed this action against Defendant CoolIT Systems, Inc. (“CoolIT”), accusing CoolIT of infringing several of Asetek’s patents (U.S. Patent Nos. 8,240,362 (the “362 Patent”); 8,245,764 (the “764 Patent”); 9,733,681 (the “681 Patent”); 10,078,354 (the “354 Patent”); and 10,078,355 (the “355 Patent”)). CoolIT counterclaimed, accusing Asetek of infringing several CoolIT patents (U.S. Patent Nos. 8,746,330 (the “330 patent”), 9,603,284 (the “284 patent”), 9,057,567 (the “567 patent”), and 10,274,266 (the “266 patent”)). On June 29, 2020, the parties appeared before the Court for a claim construction hearing. The parties have asked the Court to construe sixteen terms (several of which will share the same construction), which appear in various claims of the patents-in-suit.

II. BACKGROUND

Asetek filed this lawsuit against CoolIT on January 23, 2019, alleging infringement of the patents noted above. *See* Docket No. 1. CoolIT responded by filing an answer and counterclaim (alleging infringement of its patents) on April 11, 2019. *See* Docket No. 23. Generally speaking, the patents at issue pertain to liquid cooling technology, which transfers heat away from the heat-producing parts of electronic devices (such as processors and semiconductors). The technology

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1 operates by absorbing heat from a heat-generating device, transporting the heat away from that
2 source, and dissipating it elsewhere.

3 This is the second time these parties have appeared before the Court in a patent
4 infringement case. *See* Case No. 3:12-CV-04498-EMC. The first case was filed in 2012, and the
5 parties reached a settlement agreement, which resolved the case in 2015. *See* Docket No. 281 in
6 Case No. 3:12-CV-04498-EMC. In that case, Asetek alleged infringement of the '362 and '764
7 Patents by CoolIT. *See* Docket No. 90 in Case No. 3:12-CV-04498-EMC. CoolIT argued that the
8 '362 and '764 Patents were invalid because they were anticipated as obvious by the prior art. *See*
9 Docket No. 74 in Case No. 3:12-CV-04498-EMC. CoolIT sought declaratory relief, asking the
10 Court to declare the invalidity of the '362 and '764 Patents and non-infringement by CoolIT. *Id.*
11 Ultimately, CoolIT agreed to pay damages and to “cease selling the infringing pump design that
12 was at issue in the prior litigation”; the current suit involves similar allegations against CoolIT’s
13 “allegedly redesigned” product-line, as well as CoolIT’s infringement claims against Asetek. *See*
14 Docket No. 104 at 1.

15 III. DISCUSSION

16 A. Legal Standard

17 Claim construction is a question of law for the court to determine, although it may have
18 factual underpinnings. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed.
19 Cir. 1995), *aff’d*, 517 U.S. 370 (1996); *see also Icon Health & Fitness, Inc. v. Polar Electro Oy*,
20 656 Fed. App’x 1008, 1013 (Fed. Cir. 2016); *Multilayer Stretch Cling Film Holdings, Inc. v.*
21 *Berry Plastics Corp.*, 831 F.3d 1350, 1357 (Fed. Cir. 2016). It “serves to define the scope of the
22 patented invention and the patentee’s right to exclude.” *HTC Corp. v. Cellular Communs. Equip.,*
23 *LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017); *see also O2 Micro Int’l Ld. v. Beyond Innovation*
24 *Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (stating that the purpose of claim construction is
25 “to determin[e] the meaning and scope of the patent claims asserted to be infringed”) (internal
26 quotation marks omitted).

27 Words of a claim are generally given their ordinary and customary
28 meaning, which is the meaning a term would have to a person of
ordinary skill in the art after reviewing the intrinsic record at the

1 time of the invention. “In some cases, the ordinary meaning of
2 claim language . . . may be readily apparent even to lay judges, and
3 claim construction in such cases involves little more than the
4 application of the widely accepted meaning of commonly
5 understood words.” However, in many cases, the meaning of a
6 claim term as understood by persons of skill in the art is not readily
7 apparent.

8 *O2 Micro*, 521 F.3d at 1360 (internal citations omitted) (citing and then quoting *Phillips v. AWH*
9 *Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005)).

10 Because the meaning of a claim term as understood by persons of
11 skill in the art is often not immediately apparent, and because
12 patentees frequently use terms idiosyncratically, the court looks to
13 “those sources available to the public that show what a person of
14 skill in the art would have understood disputed claim language to
15 mean.” Those sources include “the words of the claims themselves,
16 the remainder of the specification, the prosecution history, and
17 extrinsic evidence concerning relevant scientific principles, the
18 meaning of technical terms, and the state of the art.”

19 *Phillips*, 415 F.3d at 1314. Although extrinsic evidence “can shed useful light on the relevant art,
20 . . . it is less significant than the intrinsic record in determining the legally operative meaning of
21 claim language.” *Id.* at 1317 (internal quotation marks omitted).

22 Claim construction proceeds according to important principles of interpretation. First, “the
23 claims of a patent define the invention,” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.,*
24 *Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004). The words of a claim are generally given their
25 “ordinary and customary meaning,” which is the “meaning that the term would have to a person of
26 ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13.
27 “The inquiry into how a person of ordinary skill in the art understands a claim term provides an
28 objective baseline from which to begin claim interpretation.” *Id.* at 1313. Such a person “read[s]
the claim term not only in the context of the particular claim in which the disputed term appears,
but in the context of the entire patent, including the specification.” *Id.*

“In some cases, the ordinary meaning of claim language as understood by a person of skill
in the art may be readily apparent even to lay judges, and claim construction in such cases
involves little more than the application of the widely accepted meaning of commonly understood
words.” *Id.* at 1314. In other instances, however, claim language requires interpretation. In
construing claim language, the court looks to “those sources available to the public that show what

1 a person of skill in the art would have understood disputed claim language to mean,” including
2 “the words of the claims themselves, the remainder of the specification, the prosecution history,
3 and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms,
4 and the state of the art.” *Id.* (quotations and citations omitted).

5 “[T]he claims themselves provide substantial guidance as to the meaning of particular
6 claim terms.” *Phillips*, 415 F.3d at 1314. The “context in which a term is used in the asserted
7 claim,” “[o]ther claims of the patent in question, both asserted and unasserted,” and “[d]ifferences
8 among claims” are all instructive. *Id.* “The claims, of course, do not stand alone” and instead
9 “must be read in view of the specification,” which is “[u]sually ... dispositive” and “the single best
10 guide to the meaning of a disputed term.” *Id.* at 1315.

11 Courts “normally do not interpret claim terms in a way that excludes disclosed examples in
12 the specification.” *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed.
13 Cir. 2007). Additionally, in general, “limitations from the specification are not to be read into the
14 claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998). That is
15 because “the purposes of the specification are to teach and enable those of skill in the art to make
16 and use the invention and to provide a best mode for doing so.” *Phillips*, 415 F.3d at 1323. The
17 effect and force of specifications varies. “[U]pon reading the specification in that context, it will
18 become clear whether the patentee is setting out specific examples of the invention to accomplish
19 those goals, or whether the patentee instead intends for the claims and the embodiments in the
20 specifications to be strictly coextensive.” *Id.*

21 In addition to consulting the specification, “the court should also consider the patent’s
22 prosecution history.” *Markman*, 52 F.3d at 980 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 33
23 (1966)). However, because the “prosecution history represents an ongoing negotiation between
24 the [Patent and Trademark Office] and the applicant,” it “often lacks the clarity of the
25 specification” and therefore “is less useful.” *Phillips*, 415 F.3d at 1317.

26 Though intrinsic evidence—the claims, specification, and prosecution history—is more
27 significant and reliable than extrinsic evidence, courts may also consider the extrinsic record in
28 claim construction, including expert and inventor testimony, dictionaries, and learned treatises. *Id.*

1 at 1317-18. “Within the class of extrinsic evidence, . . . dictionaries and treatises,” “especially
2 technical dictionaries . . . can assist the court in determining the meaning of particular terminology
3 to those of skill in the art” because they “endeavor to collect the accepted meanings of terms used
4 in various fields of science and technology.” *Id.* at 1318.

5 Further, expert testimony can “provide background on the technology at issue, to explain
6 how an invention works, to ensure that the court’s understanding of the technical aspects of the
7 patent is consistent with that of a person of skill in the art, or to establish that a particular term in
8 the patent or the prior art has a particular meaning in the pertinent field.” *Id.* However,
9 “conclusory, unsupported assertions” are not useful, nor should the court accept expert testimony
10 “that is clearly at odds with the claim construction mandated by the claims themselves, the written
11 description, and the prosecution history.” *Id.* (quotation and citation omitted).

12 B. Analysis

13 1. Disputed Terms of the Asetek Patents

14 a. double-sided chassis

Claim Term	Asetek’s Proposed Construction	CoolIT’s Proposed Construction	Court’s Construction
17 “double-sided chassis” 18 ’764 patent, claim 1 19 ’355 patent, claims 1, 5, 6, 10, 11, and 13 20 ’681 patent, claims 1, 8, and 11 21 22 23	“a two-sided structure, each side of which supports a pump component”	“two-sided frame or base”	“two-sided frame”

24 The dispute with this term pertains to whether “chassis” should mean a two-sided
25 “structure” which supports a pump component on each side thereof (Asetek’s construction), or
26 whether “chassis” should simply mean a two-side “frame or base” (CoolIT’s construction).
27 Asetek’s Opening Claim Construction Brief (“Asetek Opening Brief”) at 6, Docket No. 104.
28 Asetek notes that the “’355 and ’681 patents are continuations of the ’764 patent and all three

1 patents have the same specification and drawings.” *Id.* It therefore asserts that “the term ‘double-
 2 sided chassis’ in the ’764, the ’355, and the ’681 patent claims should be construed consistently
 3 across all three patents.” *Id.* CoolIT does not appear to dispute this point. *See* CoolIT’s
 4 Responsive Claim Construction Brief (“CoolIT Response Brief”) at 2–4, Docket No. 112.

5 Turning first to the language of the claims themselves, the term “double-sided chassis”
 6 appears several times, for example:

- 7 • “A cooling system for a heat-generating component, comprising: a **double-sided**
 8 **chassis** adapted to mount a pump configured to circulate a cooling liquid, the pump
 9 comprising a stator and an impeller, the impeller being positioned on the underside
 10 of the chassis and the stator being positioned on the upper side of the chassis and
 11 isolated from the cooling liquid.” ’764 Patent at 27:39–46 (Claim 1).¹
- 12 • “A liquid cooling system for cooling a heat-generating component of a computer,
 13 comprising: a reservoir configured to circulate a cooling liquid there-through, the
 14 reservoir including: a pump chamber housing an impeller and defined at least in
 15 part by an impeller cover and a **double-sided chassis**, the impeller being positioned
 16 on one side of the chassis and a stator of the pump is positioned on an opposite side
 17 of the chassis.” ’355 Patent at 28:19–27 (Claim 1).
- 18 • “A liquid cooling system for cooling a heat-generating component of a computer,
 19 comprising: a pump chamber housing an impeller, the pump chamber being defined
 20 by an intermediate member and a **double-sided chassis** housing, the impeller being
 21 part of a pump that includes a motor, a rotor, and a stator configured to circulate a
 22 cooling liquid, the impeller being positioned on one side of the **double-sided**
 23 **chassis** housing and the stator being positioned on an opposite side of the **double-**
 24 **sided chassis** housing and isolated from the cooling liquid.” ’681 Patent at 29:21–
 25 31 (Claim 8).

26 First, the language of the claims supports CoolIT’s contention that “Asetek’s construction
 27 is superfluous because it is redundant of other language in the claims.” CoolIT Response Brief at
 28 3. As is apparent from the language of the claims above, if Asetek’s proposed construction were
 to be adopted, the claims would read repetitively. For example, the relevant part of Claim 1 of the
 ’764 Patent would read: “a **two-sided structure, each side of which supports a pump**
component adapted to mount a pump configured to circulate a cooling liquid, the pump
 comprising a stator and an impeller, the impeller being positioned on the underside of the chassis
 and the stator being positioned on the upper side of the chassis.” The relevant part of Claim 10 of
 the ’355 Patent would read: “a **two-sided structure, each side of which supports a pump**

¹ In the specification of ’764 Patent: “FIG. 17 shows a preferred possible embodiment of a
 reservoir according to the invention. The reservoir housing 14, as shown in FIGS. 17 and 20, is in
 the form of a **double-sided chassis** configured to mount an electrical motor.” ’764 Patent at
 21:12–15; ’355 Patent at 21:48–52.

1 **component** adapted to mount a pump configured to circulate a cooling liquid, the pump
2 comprising a stator and an impeller, the impeller being positioned on a first side of the chassis and
3 the stator being positioned on the opposite side of the chassis.”

4 Asetek argues that “[t]he claims also make it clear that each side of the ‘double-sided
5 chassis’ supports a pump component.” Asetek Opening Brief at 7. However, it is precisely
6 because the claims already contain the limitation language Asetek seeks to additionally import.
7 Asetek’s proposed construction is neither necessary nor helpful.

8 Turning next to the specifications, Asetek notes that “none of the patent specifications
9 limits the ‘double-sided chassis’ to a ‘frame’ structure or ‘base.’” Asetek Opening Brief at 7. To
10 the contrary, the specifications describe the double-sided chassis expansively: “The reservoir
11 housing 14, as shown in FIGS. 17 and 20, is in the form of a double-sided chassis configured to
12 mount an electrical motor. The reservoir housing 14 has basically the same features as the
13 reservoir housing shown in FIG. 15-16. In the embodiment shown, the reservoir substantially has
14 a conical, circular configuration and is provided with stiffening ribs 36 extending axially along the
15 exterior of the reservoir housing 14.” ’764 Patent at 21:13–21; ’355 Patent at 21:49–57; ’681
16 Patent at 21:49–58. The specifications also note: “Other shapes such as cylindrical, circular, or
17 conical rectangular or cylindrical, rectangular or even oval or triangular shapes may be
18 adopted” ’764 Patent at 21:22–25; ’355 Patent at 21:58–63; ’681 Patent at 21:59–63. Thus,
19 the specification contemplates a wide range of reservoir designs, which Asetek asserts (and
20 CoolIT does not contest) translates to a wide range of double-side chassis designs. Accordingly,
21 the specifications do not suggest a structural or design limitation that would confine the term
22 chassis to a narrow meaning. Asetek Opening Brief at 7. More specifically, Asetek also notes
23 that the double-sided chassis in the ’764 Patent is located at the top of the liquid cooling device,
24 not at the base. Asetek Opening Brief at 8. Asetek therefore contends that it would be improper
25 to include the word “base” in the construction of the term “double-sided chassis.” *Id.*

26 CoolIT contends that, in a prior litigation, Asetek previously agreed to construe the term
27 “double-sided chassis” as “a two-sided frame or housing, each side of which has a purpose,”
28 which was adopted by the court in that case. *See Asia Vital Components Co. v. Asetek Danmark*

1 A/S, No. 16-CV-07160-JST, 2018 WL 452109, at *7 (N.D. Cal. Jan. 17, 2018). CoolIT therefore
 2 argues that Asetek’s prior position supports CoolIT’s proposed construction because they both
 3 contain the word “frame” and because that prior construction was less restrictive than what Asetek
 4 advances now. CoolIT Response Brief at 2. However, the prior construction is materially
 5 different from what CoolIT currently proposes (because it omits the second part of the prior
 6 construction), and Asetek also asserts that it shouldn’t be held to that prior construction because
 7 the term “double-sided chassis” “did not have a direct bearing on infringement or validity of
 8 Asetek’s patent claims” in the prior litigation. Asetek’s Reply in Support of Its Claim
 9 Construction Brief (“Asetek Reply Brief”) at 3, Docket No. 114.

10 In light of (1) the parties’ agreement to the words “two-sided,” (2) the fact that the second
 11 part of Asetek’s proposed definition (“each side of which supports a pump component”) is
 12 redundant with the other claim language, (3) the fact that the term “base” appears inconsistent with
 13 the depictions of the invention in the ‘764 Patent, and (4) the fact that Asetek conceded at the
 14 claim construction hearing for the instant case it was amendable to the word “frame,” instead of
 15 the word “structure,” the Court will construe the term as “two-sided frame.”

16 b. a first end or a second end of the thermal exchange chamber

18 Claim Term	Asetek’s Proposed Construction	CoolIT’s Proposed Construction	Court’s Construction
19 “a first end or a 20 second end of 21 the thermal 22 exchange 23 chamber” ’355 patent, claim 2	No construction needed: plain and ordinary meaning.	“a first edge or a second edge of the thermal exchange chamber”	No construction necessary.

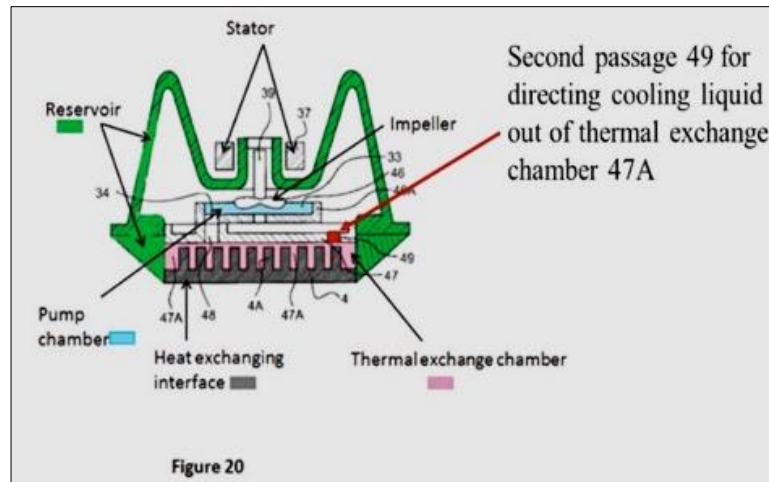
24 The dispute regarding this term focuses on whether the term “end” should be construed to
 25 be “edge.” Asetek contends that doing so would exclude a preferred embodiment. The term
 26 appears in Claim 2 of the ’355 Patent:

- 27 • The cooling system of claim 1, wherein the thermal exchange
 28 chamber includes at least one second passage configured to
 direct the cooling liquid out of the thermal exchange chamber,

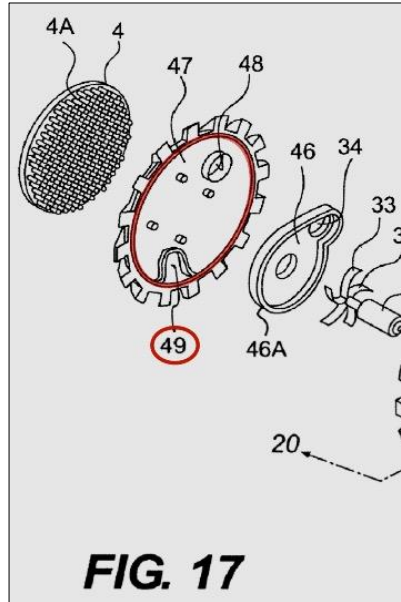
the [sic] at least one second passage is positioned at either **a first end or a second end of the thermal exchange chamber.**”

’355 Patent at 28:48–53. Asetek contends that the term “a first end or a second end of the thermal exchange chamber” does not require construction and should be given its plain and ordinary meaning, arguing only that “this phrase is written in plain English and the jury will have no trouble understanding its meaning in the context of the surrounding claim language.” Asetek Opening Brief at 8. CoolIT contends that, because Asetek took a different position and recommended construction of this term in the parties’ Joint Claim Construction and Prehearing Statement, its current position has no credibility and should be rejected. CoolIT Response Brief at 4. CoolIT further contends that that “the plain and ordinary meaning of the word ‘end’ is just a boundary or an ‘edge.’” *Id.*

Asetek asserts that one of the preferred embodiments of the ’355 Patent would be excluded if CoolIT’s proposed construction were adopted. *Id.* Specifically, it contends that the embodiment depicted in FIGS. 17 and 20 would be excluded because the cooling liquid passage it depicts is located “at the *end* of the thermal exchange chamber . . . , but not at the ‘*edge*,’ *i.e.* the extremity or margin of the chamber.” *Id.* (emphasis added).



Asetek Opening Brief at 9 (annotations added by Asetek). However, CoolIT contends that the preferred embodiment *would* be included because FIG. 17 (which offers a different vantage point of the same components) shows that the second passage 49 *is* located at the edge of the chamber. CoolIT Response Brief at 4–5.



CoolIT Response Brief at 4 (annotations added by CoolIT). This depiction appears to show that the second passage 49 is located at the edge. Accordingly, construing the term as “a first *edge* or a second *edge* of the thermal exchange chamber,” would *not* exclude a preferred embodiment.

Nonetheless, even if construing the term in this way would not exclude a preferred embodiment, the limitation should not freely be imported from the specification. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1328 (Fed. Cir. 2002) (noting that the district court erred by important a limitation from the specification into the claim). In ordinary parlance, the term “edge” has a narrower meaning than the term “end.” Compare, e.g., “Edge.” *Merriam-Webster.com Dictionary*, MERRIAM-WEBSTER (July 10, 2020) <https://www.merriam-webster.com/dictionary/edge> (“the *narrow* part adjacent to a border” (emphasis added)); with “End.” *Merriam-Webster.com Dictionary*, MERRIAM-WEBSTER (July 5, 2020), <https://www.merriam-webster.com/dictionary/end> (“the part of an area that lies at the boundary”). For example, a component can be located at the *end* of something, while not being located at the *edge* of that thing. Asetek produces no convincing evidence that the claim was intended to employ a meaning difference from ordinary parlance.

Thus, because construing the word “end” to mean “edge” would impermissibly narrow the language of the claim, the Court declines to construe this word. It will, at this juncture adhere to its plain and ordinary meaning.

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c. stator/ stator... isolated from the cooling liquid

Claim Term	Asetek’s Proposed Construction	CoolIT’s Proposed Construction	Court’s Construction
“stator”/ “stator... isolated from the cooling liquid” ’764 patent, claims 1, 10, and 15 ’681 patent, claims 1, 8, and 11	No construction needed for the entire phrase “stator... isolated from the cooling liquid”: plain and ordinary meaning If the Court determines that the term “stator” should be construed, then the entire phrase “stator ... isolated from the cooling liquid” should be construed, and as follows: “the stationary active parts of the motor do not come in contact with the cooling liquid” If only stator is construed, then: “the stationary active parts of the motor”	“stator”: “the stationary parts of the motor during its operation” If the entire limitation “stator ... isolated from the cooling liquid” is construed, then: “no part of the stator is in contact with the cooling liquid”	stator: “stationary parts of the motor that perform or support an electrical or magnetic function of the motor”

The parties’ dispute regarding these terms focuses on the clarification of which of the non-moving parts of a motor are encompassed by the term “stator.” Specifically, if construction is necessary, Asetek wishes to clarify that “only the *active* parts of the motor that remain stationary during operations constitute the ‘stator,’ not *all* stationary parts.” Asetek Opening Brief at 12 (emphasis added). By “active” Asetek means “active/electrical,” *i.e.* parts that would short-circuit if they came into contact with liquid. CoolIT, for its part, contends that “the stator comprises also the portion that supports the stationary active parts and not just the stationary active parts themselves.” CoolIT Response Brief at 8.

Although the term also appears elsewhere, by way of example, the term appears in the following claims of the ’764 and ’681 Patents:

- “A cooling system for a heat-generating component, comprising: a double-sided chassis adapted to mount a pump configured to circulate a cooling liquid, the pump comprising a stator and an impeller, the impeller being positioned on the underside of the chassis and the **stator being positioned on the upper side of the chassis and isolated from the cooling liquid.**” ’764 Patent at 27:39–46 (Claim 1).

- 1 • “A cooling system for a computer system, comprising: a centrifugal pump adapted
2 to circulate a cooling liquid, the pump including: an impeller exposed to the
3 cooling liquid; and a **stator isolated from the cooling liquid . . .**” ’764 Patent at
4 28:27–31 (Claim 10).
- 5 • “A liquid cooling system for cooling a heat-generating component of a computer,
6 comprising: a double-sided chassis adapted to mount a pump configured to
7 circulate a cooling liquid, the pump comprising a motor with a stator and an
8 impeller, the impeller being positioned on one side of the chassis and the **stator
9 being positioned on an opposite side of the chassis and isolated from the
10 cooling liquid.**” ’681 Patent at 28:18–25 (Claim 1).
- 11 • “The liquid cooling system of claim 8, wherein the double-sided chassis housing
12 defines a recess configured to house the **stator.**” ’681 Patent at 30:29–31 (Claim
13 11).

14 In examining this language, Asetek does not contend that the language of the claims makes clear
15 that *only* the active parts of the stator are isolated from the liquid, but rather asserts that “even a
16 lay juror would understand that the active/electrical elements of the motor must be shielded from
17 the cooling liquid to prevent shorting,” Asetek Opening Brief at 10 (emphasis in original).

18 Turning to the language of the specification, Asetek asserts that the specifications describe
19 the stator as involving “active elements,” *id.*, however—like the claims—the specifications do not
20 make clear that *only* active elements are isolated from the liquid. *See, e.g.*, ’764 Patent at 25:49–
21 62 (“FIG. 18 shows an embodiment of an AC motor in which one stator pole 54 is longer than the
22 other stator pole 55 by an amount indicated by 1. With this configuration the permanent-magnet
23 rotor 39 with an ideal line 56 separating the north N and the south S of the rotor, is positioned so
24 that the ideal line 56 do not coincide with the median axis 57 of the stator 37, but so that the ideal
25 line 56 is tilted by a certain angle α . in respect to the median 57 of the stator 37. Two
26 energizing windings 58, 59 are provided on the two poles 54,55 of the stator 37, respectively, and
27 the energizing windings are connected in series and are powered, through terminals (not shown),
28 by an AC power source. With this configuration of the AC motor, the motor is able to start more
easily in an intended rotational direction of the rotor.”).

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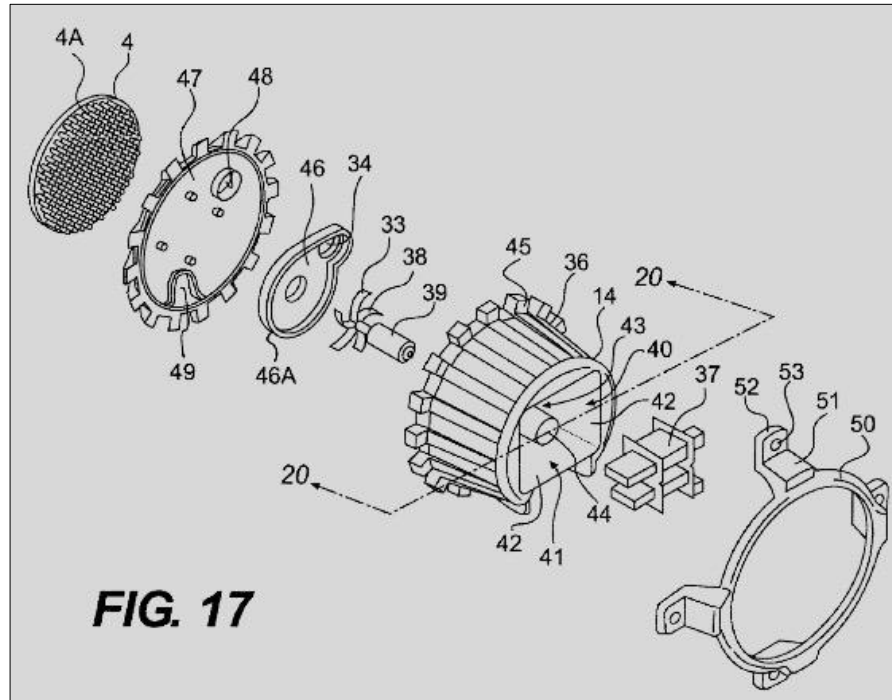
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1 The Court also examined FIG. 17 of the '764 Patent.



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14 In relevant part, the '764 Patent describes the stator 37 in FIG. 17 as follows: “a liquid-proof
15 division is made between the rotor 39 of the motor, said rotor 39 being placed inside the interior of
16 the jacket 44 and being submerged in the cooling liquid, and the stator 37 of the pump, said stator
17 37 being positioned in the recess 40 and surrounding the exterior of the jacket 44. Accordingly,
18 the stator 37 need not be sealed against the cooling liquid, because the recess 40 together with the
19 jacket 44 ensures the stator staying dry from the cooling liquid, but the stator 37 still being capable
20 of driving the rotor 39, when being supplied with electrical power from a power supply (not
21 shown) of the computer system.” '764 Patent at 21:41–51. Thus, both the matrix shape of the
22 stator 37 and the fact that the stator 37 “surround[s] the exterior of the jacket 44” indicate that the
23 stator includes the *structural* components that CoolIT alleges are properly considered part of the
24 stator.

25 The parties also focus much of their analysis on testimony given by their experts during
26 deposition, which primarily serves to support each party’s own construction of the term. For
27 example, CoolIT’s expert (Dr. Pokharna) offered the following testimony regarding the term
28 “stator” during his deposition:

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Q. When you say that a stator is the stationary part of the motor during its operation, what parts are you considering as the stator?

A: The primary parts that I'm considering are the functional parts of the motor. I'm not -- I'm -- again in a motor, I'm only worried about the functional part of the motor. So there is a stator which consists of things like windings, coils, separator for the coils, mounting assembly for the coils. These are all providing an assembly for what I call the stationary part of the motor, stator. It's the functional element within the motor that remains -- that does not rotate, that does not move. That's really what I mean by stator.

Pokharna Dep. at 54–55 (objections and reporter comments omitted). Asetek’s expert, Dr. Tilton, also offered deposition testimony on the term “stator”:

Q. What is a stator?

A. Well, the stator is the stationary active electrical element. It's not rotating, but it's the part that -- like, for example, in a burstless DC motor you have an electric motor that's commutated and the electrical current switches in the coils so that that can be used to create a rotating magnetic field, and that interacts with the magnetic field in the rotor to make it spin.

Q. So the stator has to be electrical?

A. Yes, the stator has an electrical function.

Tilton Dep. at 92–93 (objections and reporter comments omitted). However, Dr. Tilton also acknowledged that, at times, he has used the terms “stator” and “stator assembly” interchangeably:

Q. (by Kyle Chen) And when you used the term stator, you believe you have always used the term consistently; correct?

A. (by Dr. Tilton) I think with respect to the term stator, it being the active electric element of a motor, I've always used stator to mean that. When I use the term stator sometimes, just in the context of talking, you're referring to the whole stator assembly. So I guess if there's an inconsistency, it would be in some cases you're referring to the stator as being the active electrical element and some cases you might be referring to it as the entire stator assembly.

Q. But you think that you have used the term stator consistently; correct?

A. With the exception of what I just described, yeah. I said in some cases you're casually -- or you're referring to stator as the whole stator assembly as opposed to just the active electrical element.

Q. So you have used the term stator to mean stator assembly; correct?

1 A. I have used that in some discussions.

2 Tilton Dep. at 146–47. Although Asetek contends Dr. Tilton used the terms synonymously only
3 because (1) the term “stator” was not a disputed term in the litigation in which Dr. Tilton used
4 these terms interchangeably, and (2) it is “being discussed at a more granular level in this action,”
5 Asetek Reply Brief at 7, it is nonetheless significant that Dr. Tilton saw fit to use the terms
6 interchangeably even in a somewhat different context. It suggests that, to a certain degree, the
7 term “stator” can and does encompass the mechanical components associated with the term “stator
8 assembly” as understood by those skilled in the art.

9 Finally, the parties refer to definitions of “stator” provided in engineering dictionaries.
10 Asetek relies on the following two definitions:

- 11 • **Comprehensive Dictionary of Electrical Engineering** – the portion of a motor
12 that includes and supports the stationary active parts. The stator includes the
13 stationary portions of the magnetic circuit and the associated windings and leads.
- 14 • **Dictionary of Electrical and Computer Engineering** – [ELEC] The portion of a
15 rotating machine that contains the stationary parts of the magnetic circuit and their
16 associated windings.

17 Asetek Opening Brief at 11. While CoolIT relies on the following definitions:

- 18 • **Motors for Makers. A Guide to Steppers, Servos, and Other Electric Machines**
19 - There are two ways to look at the motor’s structure – mechanically and
20 electrically. From a mechanical standpoint, the motor consists of two parts. The
21 *rotor* is the part that moves and the *stator* is the part that stays in place. (italics in
22 original)
- 23 • **Improving Motor and Drive System Performance (released by the U.S.**
24 **Department of Energy)** – The stationary part of a motor’s magnetic circuit. In
25 induction motors, it is the outer annular iron structure containing the power
26 windings. (This definition was also included in the parties’ Joint Claim
27 Construction Statement. *See* Docket No. 67.)

28 CoolIT Responsive Brief at 6, 7. The first of Asetek’s dictionary definitions includes the phrase

1 “the portion of a motor that includes and *supports* the stationary active parts,” while the second
 2 definition includes the phrase the “portion of a rotating machine that *contains* the stationary parts.”
 3 Both of these explanations suggest that structural and/or supportive non-moving parts would
 4 properly be considered part of the stator.

5 Given the intrinsic and extrinsic evidence, the Court will construe the term “stator” as
 6 “stationary parts of the motor that perform or support an electrical or magnetic function of the
 7 motor.”

8 d. intermediate member

Claim Term	Asetek’s Proposed Construction	CoolIT’s Proposed Construction	Court’s Construction
11 “intermediate member” 12 ’764 patent, claims 15 and 16 13 ’681 patent, claims 8 and 16	11 No construction needed. 12 If the Court determines that the term should be construed, then: 13 “structure between impeller cover and heat exchange/heat-exchanging interface”	11 Means-plus-function element. 12 Corresponding structures: Element 47 in FIGS. 17 and 20 of ’764 and ’681; 13 Functions in ’764: as to claim 15, for partially defining the thermal exchange chamber; as to claim 16: for providing a second passage that is aligned with the first opening. 14 Functions in ’681: as to claim 8, for partially defining the pump chamber, for coupling to the heat-exchanging interface, and for defining a first passage; as to claim 16, for removably coupling to the heat-exchanging interface.	11 Not a means-plus-function term.

19 CoolIT asserts that “intermediate member” is a means-plus-function term. “Means-plus-
 20 function claiming occurs when a claim term is drafted in a manner that invokes 35 U.S.C. § 112,
 21 para. 6, which states:
 22
 23
 24
 25
 26
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1 An element in a claim for a combination may be expressed as a
 2 means or step for performing a specified function without the recital
 3 of structure, material, or acts in support thereof, and such claim shall
 be construed to cover the corresponding structure, material, or acts
 described in the specification and equivalents thereof.

4 35 U.S.C. § 112. “In enacting this provision, Congress struck a balance in allowing patentees to
 5 express a claim limitation by reciting a function to be performed rather than by reciting structure
 6 for performing that function, while placing specific constraints on how such a limitation is to be
 7 construed, namely, by restricting the scope of coverage to only the structure, materials, or acts
 8 described in the specification as corresponding to the claimed function and equivalents thereof.”
 9 *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347 (Fed. Cir. 2015). Asetek notes that, in the
 10 parties’ previous litigation, CoolIT did not identify this term as a mean-plus-function term.
 11 Asetek Opening Brief at 12.

12 This term appears in Claims 15 and 16 of the ’764 patent and in Claims 8 and 16 of the
 13 ’681 patent:

- 14 • “A cooling system for a heat-generating component, comprising: . . . a reservoir including
 15 an impeller cover, an **intermediate member** and a heat exchange interface, wherein a top
 16 wall of the reservoir and the impeller cover define a pump chamber for housing the
 17 impeller, and the **intermediate member** and the heat exchange interface define a thermal
 exchange chamber, the pump chamber and the thermal exchange chamber being spaced
 apart from each other in a vertical direction and fluidly coupled together.” ’764 Patent at
 28:57–29:4 (Claim 15).
- 18 • “The cooling system of claim 15, wherein the impeller cover includes a first opening
 19 radially offset from a center of the impeller and the **intermediate member** includes a
 second passage that is aligned with the first opening, the first and the second opening being
 20 configured to direct the cooling liquid from the pump chamber into the thermal exchange
 chamber.” ’764 Patent at 30:1–6 (Claim 16).
- 21 • “A liquid cooling system for cooling a heat-generating component of a computer,
 22 comprising: a pump chamber housing an impeller, the pump chamber being defined by an
intermediate member and a double-sided chassis” . . . “a heat-exchanging interface
 23 coupled to the **intermediate member**” . . . “wherein the pump chamber includes: . . . an
 outlet that fluidly couples the pump chamber to the thermal exchange chamber via a first
 passage defined by the **intermediate member**” . . . “wherein the **intermediate member**
 24 defines at least one second passage configured to direct the cooling liquid out of the
 thermal exchange chamber.” ’764 Patent at 29:21–30:19 (Claim 8).
- 25 • “The liquid cooling system of claim 8, wherein the heat-exchanging interface is removably
 coupled to the **intermediate member**.” ’764 Patent at 30:44–46 (Claim 16).

26 In *Williamson*, the court noted: “To determine whether § 112, para. 6 applies to a claim
 27 limitation, our precedent has long recognized the importance of the presence or absence of the
 28 word ‘means.’” 792 F.3d at 1348. Accordingly, “failure to use the word ‘means’ . . . creates a

1 rebuttable presumption . . . that § 112, para. 6 does not apply.” *Id.*

2 Here, because the claims do not use the word “means,” there is a rebuttable presumption
3 that § 112, para. 6 does not apply. However, where the claims do not use the word “means” but
4 “the challenger demonstrates that the claim term fails to ‘recite[] sufficiently definite structure’ or
5 else recites ‘function without reciting sufficient structure for performing that function,’” the
6 presumption can be overcome, and § 112, para. 6 will apply. *Id.* at 1348 (quoting *Watts v. XL*
7 *Sys., Inc.*, 232 F.3d 877, 880 (Fed.Cir.2000)). Asetek contends that “CoolIT cannot meet that
8 burden because the claim term ‘intermediate member’ is not recited in terms of its function and
9 also because it connotes sufficient structure.” Asetek Opening Brief at 13.

10 With respect to whether the term “intermediate member” is cited in functional terms,
11 Asetek contends that it is not because the claims “do not describe the ‘intermediate member’ by
12 what it does.” Asetek Opening Brief at 13. In response, CoolIT contends that Claim 15 of ’764
13 explains that “the **intermediate member** and the heat exchange interface **define** a thermal
14 exchange chamber,” while Claim 16 states that “the **intermediate member includes** a second
15 passage that is aligned with the first opening.” *See* CoolIT Response Brief at 10. Likewise, Claim
16 8 of the ’681 Patent states that “the **intermediate member defines** at least one second passage
17 configured to direct the cooling liquid out of the thermal exchange chamber,” while Claim 16 of
18 the ’764 Patent states “the heat-exchanging interface is removably **coupled to the intermediate**
19 **member.**” CoolIT reads this language (“define(s),” “includes,” and “coupled to”) as “functional.”
20 However, as the text of the claims (above) demonstrates, these words do not state the “function” of
21 the “intermediate member.” To the contrary, they describe structure more than they describe
22 function.

23 The term in question in *Williamson* – “a **distributed learning control module** for
24 receiving communications transmitted between the presenter and the audience member computer
25 systems and for relaying the communications to an intended receiving computer system and for
26 coordinating the operation of the streaming data module,” 792 F.3d at 1344 – was described in
27 functional terms as: receiving communications transmitted between the presenter, relaying the
28 communications to an intended receiving computer system and, coordinating the operation of the

1 streaming data module. Those stated functions in *Williamson* stand in contrast to the more
 2 structural nature of the roles played by the “intermediate member” at issue here. Here, the claims
 3 describe how the “intermediate member” interacts with other component parts to inform structural
 4 components of the invention. *See also, e.g., Finjan, Inc., v. Proofpoint, Inc.*, No. 13-CV-05808-
 5 HSG, 2015 WL 7770208, at *11 (N.D. Cal. Dec. 3, 2015) (quoting *Williamson*, 792 F.3d at 1350)
 6 (“Unlike *Williamson*, where the term ‘module’ was ‘simply a generic description for software or
 7 hardware that performs a specified function,’ here, the intrinsic evidence establishes the structural
 8 character of ‘content processor’ through its interaction with the system’s other components.”).
 9 Moreover, the fact that the term “intermediate member” is grammatically coupled with, *e.g.*, “a
 10 heat exchange interface” (*see* Claim 15) which is clearly not a means-plus-function term, further
 11 demonstrates it is not such a term.

12 Accordingly, “intermediate member” is not a means-plus-function term. Because the
 13 parties do not advance arguments in favor of construction outside of CoolIT’s contention that
 14 Section 112 should apply, the Court will not otherwise construe this term.

15 2. Disputed Terms of the CoolIT Patents

16 a. fluid heat exchanger

18 Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
19 “fluid heat exchanger” 20 ’330 patent, 21 claims 1, 2, 4, 6, 22 12, 14, 15 23 ’284 patent, 24 claims 1, 3, 4, 5, 25 6, 15, 19, 20, 21, 26 29 27 ’266 patent, 28 claims 13, 14, 15	“component(s) configured to transfer energy to or from a fluid through convection”	“Component that transfers heat from an electronic heat source to a cooling liquid circulated by a pump that is external to the component”	“component that transfers heat from a heat source to a cooling liquid circulated by a pump that is external to the component”

1 The key dispute here is whether the pump is external to the fluid heat exchanger
 2 component. The term appears in of a number of the patents-in-suit and many of the claims; for
 3 example:

- 4 • A **fluid heat exchanger** comprising:
 - 5 a heat spreader plate defining an upper surface;
 - 6 a plurality of fins extending from respective proximal ends positioned adjacent the
 7 upper surface of the heat spreader plate to respective distal ends positioned dis-
 8 tally from the upper surface of the heat transfer plate, wherein the plurality of
 9 fins defines a corresponding plurality of microchannels configured to direct a
 10 heat transfer fluid over the heat spreader plate, wherein each microchannel in
 11 the plurality of microchannels has a first end and an opposite end, wherein each
 12 microchannel in the plurality of microchannels extends substantially parallel
 13 with each other microchannel in the plurality of microchannels and has a
 14 continuous channel flow path between its respective first end and its respective
 15 opposite end;
 - 16 a plate positioned over the distal ends of the plurality of fins and the corresponding
 17 plurality of microchannels to close off the plurality of microchannels adjacent
 18 the distal ends of the plurality of fins, wherein the plate positioned over the
 19 plurality of distal fin ends defines an elongate fluid inlet opening overlying and
 20 extending transversely relative to the plurality of microchannels between the
 21 plurality of microchannel first ends and opposite ends, wherein the plate is so
 22 positioned over the plurality of fins as to define a first fluid outlet opening from
 23 each microchannel in the plurality of microchannels at each of the
 24 microchannel first ends and an opposite fluid outlet opening from each
 25 microchannel in the plurality of microchannels at each of the microchannel
 26 opposite ends;
 - 27 a housing spaced from the plate positioned over the plurality of distal fin ends,
 28 wherein the housing defines an inlet and an outlet, wherein the inlet defined by
 the housing opens to an inlet header and at least the first fluid outlet opening
 from each microchannel in the plurality of microchannels opens to an outlet
 header, wherein the outlet defined by the housing opens from the outlet header,
 and
 - 29 a seal extending between the housing and the plate positioned over the plurality of
 distal fin ends, wherein the elongate fluid inlet opening defined by the plate
 extends between a proximal end and a distal end, wherein a region of the inlet
 header is positioned adjacent a first side of the fins and a region of the outlet
 header is positioned adjacent the second side of the fins, and wherein the fins,
 the plate, the housing, and the seal are arranged such that the heat transfer fluid
 is directed from the inlet opening to the inlet header, through the elongate fluid
 inlet opening defined by the plate and into the microchannels, from the
 microchannels to the outlet header, and from the outlet header to the outlet
 defined by the housing. '330 Patent at 7:40–8:25 (Claim 1).
- 30 • “A **fluid heat exchanger** according to claim 1 wherein the elongate fluid inlet
 opening is positioned in the middle 50% of a length measured between the
 microchannel first ends and the microchannel opposite ends.” '330 Patent at 8:26–
 29 (Claim 2).
- 31 • “A **fluid heat exchanger** according to claim 1 wherein the heat spreader plate has
 an intended heat generating component contact region in a known location on the
 heat spreader plate and wherein the fluid inlet opening is positioned adjacent a
 central region of the intended heat generating component contact region.” '330
 Patent at 8:34–39 (Claim 4).

1 CoolIT contends that “the term ‘fluid heat exchanger’ appears only in the preambles of the
2 claims and should therefore not be limiting. This is because the phrase does not recite essential
3 structure or steps, it is not necessary to give life, meaning, and vitality to any claim, and it does not
4 provide antecedent basis for any limitations.” CoolIT’s Opening Claim Construction Brief
5 (“CoolIT Opening Brief”) at 10, Docket No. 105. However, the cases cited by CoolIT indicate
6 that, contrary to what CoolIT represents (that terms appearing only in the preambles of claims
7 should not be limiting), the rule is narrower: that preamble language that states a *purpose* or *use* of
8 the invention is not to be treated as limiting. *See, e.g., In re Fought*, 941 F.3d 1175, 1178 (Fed.
9 Cir. 2019) (internal citations and quotation marks omitted) (“Preamble language that merely states
10 the purpose or intended use of an invention is generally not treated as limiting the scope of the
11 claim. However, the preamble constitutes a limitation when the claim(s) depend on it for
12 antecedent basis.”); *Arctic Cat Inc. v. GEP Power Prod., Inc.*, 919 F.3d 1320, 1328 (Fed. Cir.
13 2019) (internal citations and quotation marks omitted) (“We have long ruled that a preamble is not
14 limiting where a patentee defines a structurally complete invention in the claim body and uses the
15 preamble only to state a purpose or intended use for the invention.”)). Moreover, the Federal
16 Circuit has clarified:

17 That rule is grounded in the statutory distinction, in identifying the
18 permissible subject matter of a patent claim, between a physical
19 product (which may be defined in part by its claimed functional
20 capabilities) and activities that constitute a process (which may
21 include a new “use” of a known invention). In particular, the rule
22 against giving invention-defining effect to intended-use preamble
23 language reflects a longstanding substantive aspect of the patent
24 statute—specifically, the “well settled” fundamental principle “that
25 the recitation of a new intended use for an old product does not
26 make a claim to that old product patentable.”

23 *Arctic Cat*, 919 F.3d at 1328 (internal citations omitted). Accordingly, because the preambles in
24 the relevant claims do not state a purpose or use, it may be appropriate to permit the preamble to
25 limit the claims in this context.

26 In examining the patents’ specifications, the Court begins by noting that the patents at
27 issue have titled their inventions differently. *See UltimatePointer, L.L.C. v. Nintendo Co.*, 816
28 F.3d 816, 823 (Fed. Cir. 2016) (citing *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553,

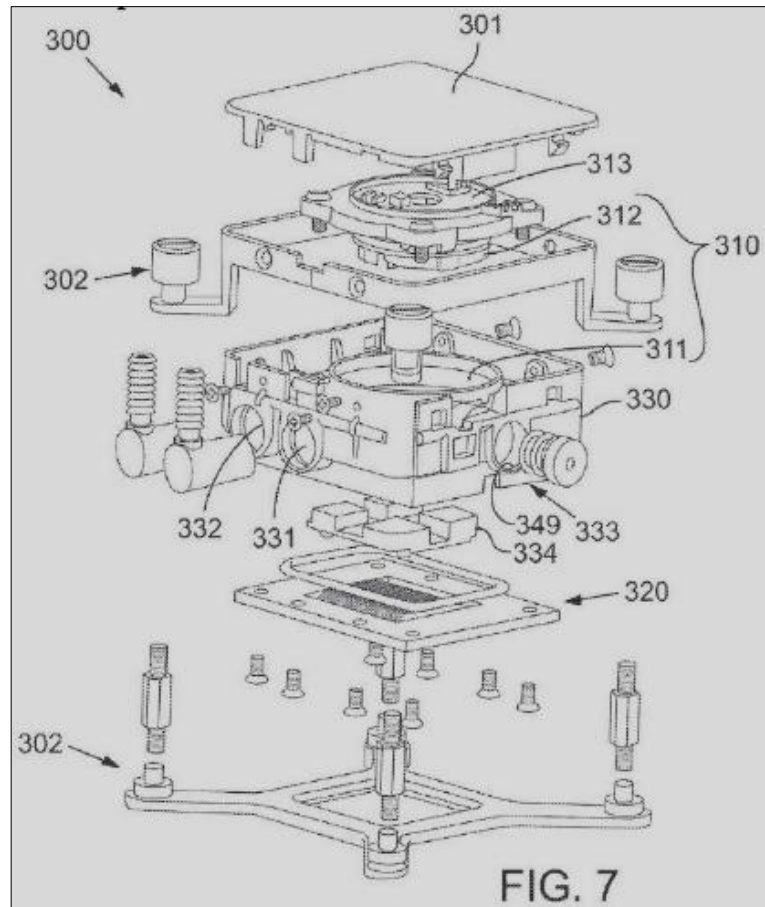
1 1557 (Fed. Cir. 1995)) (using patent title to inform claim construction); *but see Pitney Bowes, Inc.*
2 *v. Hewlett-Packard Co.*, 182 F.3d 1298, 1312 (Fed. Cir. 1999) (noting “[t]he near irrelevancy of
3 the patent title to claim construction”). The ’266 Patent protects “Fluid Heat Exchange *Systems*,”
4 (emphasis added) while the ’284 and ’330 Patents protect a “Fluid Heat *Exchanger* Configured to
5 Provide a Split-Flow” (emphasis added). The specifications of the ’284 and ’330 Patents, which
6 protect a fluid heat exchanger, each mention the word “pump” only once, and they do so only to
7 note that the split-flow design lessens the force required to pump liquid through the heat
8 exchanger. *See* ’284 Patent at 6:23–24 (the sole mention of the word “pump” in the ’284 Patent
9 notes that the split-flow design “lessens the **pump** force required to move the fluid through the
10 heat exchanger”); ’330 Patent at 6:10–12 (the sole mention of the word “pump” in the ’330 Patent
11 notes that the split-flow design “lessens the **pump** force required to move the fluid through the
12 heat exchanger”). Moreover, the word “pump” does not even appear as a noun in those two
13 patents; instead, it merely modifies the word “force.” *Id.* In contrast, the ’266 Patent, which
14 protects “Fluid Heat Exchange *Systems*,” mentions and discusses the word “pump” dozens of
15 times. *See generally* ’266 Patent. Although the terms of one patent generally do not define the
16 terms of a separate independent patent, it suggests that those skilled in the arts understood there is
17 a difference between a heat exchange “system” and a heat exchanger itself.

18 Significantly, neither the ’330 nor the ’284 Patent mention the concept of a pump. While
19 the Court is mindful of the rule that importing limitations from the specification is inappropriate,
20 *see, e.g., Teleflex*, 299 F.3d at 1328 (noting that the district court erred by important a limitation
21 from the specification into the claim); *CollegeNet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225,
22 1231 (Fed. Cir. 2005) (“this court will not at any time import limitations from the specification
23 into the claims.”), it is appropriate to consider the specification for proper context about the
24 meaning of a contested term. *See CollegeNet*, 418 F.3d at 1231; *AquaTex Indus., Inc. v.*
25 *Techniche Sols.*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (looking to “[t]he combined teachings
26 within the specification” for evidence of how one of ordinary skill in the art would understand a
27 term). *See generally Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1345 (Fed. Cir.
28 2008) (quoting *Phillips*, 415 F.3d at 1323) (“[I]n *Phillips* . . . , this court acknowledged the

1 difficult distinction between ‘using the specification to interpret the meaning of a claim and
 2 importing limitations from the specification into the claim’” and added that “the distinction is
 3 manageable ‘if the . . . focus remains on understanding how a person of ordinary skill in the art
 4 would understand the claim terms.’”). Here, the fact that the ’330 and ’284 patents never mention
 5 or depict a pump component suggests that a pump is not part of what the patentee claimed.

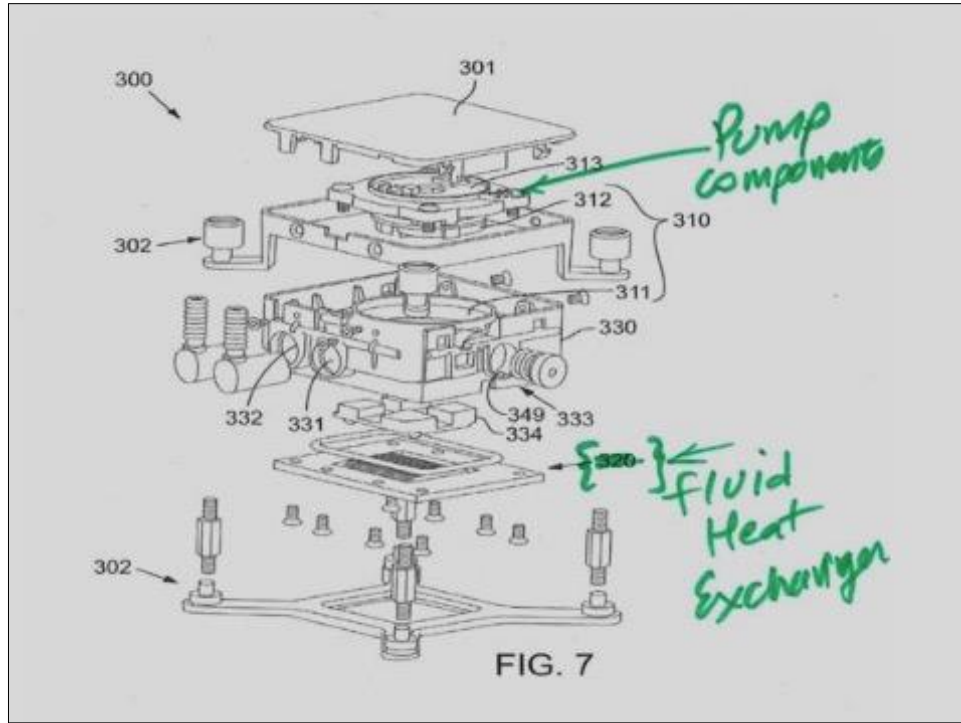
6 Indeed, this conclusion is affirmatively reinforced by the specification of the ’266 Patent.

7 The figure below shows FIG. 7.



23 CoolIT contends that defining “fluid heat exchanger” to have an external pump would exclude this
 24 embodiment of the invention, which contemplates “an integrated pump and heat exchanger
 25 assembly.” ’266 Patent at 5:42–43. Because FIG. 7 shows a pump “integrated with a “heat
 26 exchanger,” CoolIT contends that this embodiment indicates that the pump need not be external to
 27 the fluid heat exchanger. However, during his deposition, CoolIT’s expert labeled the area 313 as
 28 the “pump component” and labeled 320 as the “fluid heat exchanger” as illustrated below. *See*

1 Declaration of Dr. Himanshu Pokharna (“Pokharna Decl.”), Docket No. 105-3.



13
14 That labeling is consistent with the explanation in the patent; as Asetek points out: “Figure 7 of the
15 ’567 and the ’266 patents illustrates how subassembly 300 combines a pump 310, a heat
16 exchanger 320, and a housing 330 having integrated fluid conduits. Heat exchanger 320 is
17 specifically identified as the ‘lower-most face of the assembly 300.’ While the integrated
18 assembly 300 includes a pump 310, the heat exchanger 320 does not. That is, pump 310 is distinct
19 from, and external to, heat exchanger 320 within integrated subassembly 300.” Asetek Danmark
20 A/S’s Responsive Claim Construction Brief (“Asetek Response Brief”) at 9–10, Docket No. 113
21 (internal citations and some quotation marks omitted).

22 CoolIT also asserts that “the specifications of the CoolIT Patents expressly state that, [a]s
23 used herein, the terms ‘heat sink’ and ‘heat exchanger’ are interchangeable and mean a device
24 configured to transfer energy to or from a fluid through convection (*i.e.*, a combination of
25 conduction and advection) heat transfer.” CoolIT Opening Brief at 10 (some internal quotation
26 marks omitted) (citing ’567 Patent at 7:6–9; ’266 Patent at 7:16–21). Its contention is that this
27 equivalency supports CoolIT’s assertion that a pump may be internal to the heat exchanger.
28

1 However, as Asetek points out: “[E]lsewhere the ’266 patent notes that a pump assembly must be
2 integrated with a heat sink to develop a heat exchange assembly/system, thus indicating that a
3 pump is not included within a heat sink.” Asetek Response Brief at 11; *see, e.g.*, ’266 Patent at
4 1:37–39 (“For example, there remains a need for low-profile heat exchange assemblies (e.g.,
5 integrated heat sink and pump assemblies).”). Thus, even assuming equivalency between the
6 terms “heat sink” and “heat exchanger,” such an argument does not help CoolIT’s position.

7 While mindful that a court generally does not read specifications as imposing limitations
8 upon the claims, specifications may nonetheless shed light upon how a person of ordinary skill in
9 the art would understand the claim terms, as is the case here. *See, e.g., AquaTex Indus.*, 419 F.3d
10 at 1382 (looking to “[t]he combined teachings within the specification” for evidence of how one of
11 ordinary skill in the art would understand a term); *Baldwin Graphic*, 512 F.3d at 1345 (quoting
12 *Phillips*, 415 F.3d at 1323) (noting that the “focus [when reading the specification] remains on
13 understanding how a person of ordinary skill in the art would understand the claim terms”). On
14 this issue, the specifications are compelling. The Court construes the term “fluid heat exchanger”
15 to mean “component that transfers heat from a heat source to a cooling liquid circulated by a pump
16 that is external to the component.”

17 b. inlet/outlet header & inlet/exhaust manifold

19 Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
20 “[inlet/outlet] header” 21 ’330 patent, claims 22 1, 12, 14, and 15	23 “inlet header”: “a space 24 out from which the 25 liquid to be distributed 26 flows” 27 “outlet header”: “a space 28 into which the collected liquid flows”	“a region into which, or out from which, several smaller channels lead”	“inlet header”: “a space out from which the liquid to be distributed flows” “outlet header”: “a space into which the collected liquid flows”
“[inlet/exhaust] manifold” ’567 patent, claims 1 and 28	“inlet manifold”: “a space out from which the liquid to be distributed flows” “exhaust manifold”: “a	“manifold” should be construed the same as “header” to mean: “a region into which, or out from which, several smaller channels lead”	“inlet manifold”: “a space out from which the liquid to be distributed flows”

'266 patent, claims 1 and 5	space into which the collected liquid flows”		“exhaust manifold”: “a space into which the collected liquid flows”
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“The parties agree that ‘inlet header’ and ‘inlet manifold’ should be construed the same way and that ‘outlet header’ and ‘exhaust manifold’ should be construed the same way.” CoolIT Opening Brief at 15. Both parties agree that the term should be construed.

The terms appear in, for example, the following claims:

- “A fluid heat exchanger according to claim 14, wherein the **inlet header** region juxtaposed with a first side of the plurality of juxtaposed fins constitutes a first portion of an **inlet header**, wherein a second portion of the inlet header extends transversely over the microchannels.” ’330 Patent at 10:11–16 (Claim 15).
- “A heat exchange system comprising: . . . a compliant member matingly engaged with the second side of the housing member, . . . wherein the compliant member and the groove together define a portion of an **inlet manifold** configured to hydraulically couple in parallel each of the microchannels to at least one other of the microchannels, and wherein the housing member further defines a portion of an inlet plenum, . . . wherein a portion of the compliant member occupies a portion of the recessed region defined by the second side of the housing member and urges against a corresponding wall of the recessed region while leaving a portion of the recessed region defined by the second side of the housing member unoccupied to define first and second **exhaust manifold** regions positioned opposite to each other relative to the recessed groove and opening from end regions of the microchannels.” ’567 Patent at 19:16–46.

In support of its proposed construction, Asetek relies the following details from the patents’ specifications: (1) “[i]n the ’330 patent specification, only two regions of the fluid heat exchanger 100 are referred to as the ‘headers’—inlet header 112 and outlet header 126,” Asetek Response Brief at 18 (citing ’330 Patent at 3:66–4:3, 5:1–8), (2) “[n]owhere does the [’330] patent describe inlet opening 114 (through which cooling liquid enters the plurality of microchannels) or the outlet openings 124 (through which cooling liquid exits the plurality of microchannels) as ‘headers’ or portions of the ‘headers,’” *id.*, and (3) to the contrary, “the specification distinctly separates the headers 112/126 from the openings 114/124,” *id.* (citing ’330 Patent at 3:66–4:3 (“Fluid heat exchanger 100 further includes a fluid inlet passage 104, which in the illustrated embodiment includes a port 111 through the housing opening to a header 112 and *thereafter* a fluid inlet opening 114 to the microporous fluid channels 103.”) (emphasis in the brief, but not the

1 patent); '330 Patent at 5:1–5 (“Heat exchanger 100 further includes a fluid outlet passage 106,
2 which in the illustrated embodiment includes one or more fluid outlet openings 124 from the
3 microporous fluid channels 103, a header 126, and an outlet port 128 opening from the
4 housing.”)).

5 CoolIT relies on statements made during the prior prosecution and the testimony of its
6 expert. First, it argues that its proposed construction is “consistent with CoolIT’s statements made
7 during prosecution,” CoolIT Opening Brief at 14: “some disclosed heat exchangers have opposed
8 outlet headers (or portions thereof) extending over the fins and over the plate, and that some
9 disclosed heat exchangers have an inlet header (or a portion thereof) positioned between the
10 opposed outlet headers,” Exh. 4 to CoolIT Opening Brief (“Summary of Telephonic Examiner
11 Interview”) at PDF 74, Docket No. 105-6; *Walker Digital, LLC v. Microsoft Corp.*, 484 F. App’x
12 496, 499 (Fed. Cir. 2012) (looking to statements made during patent prosecution to inform claim
13 construction) (“Statements made by Walker Digital during prosecution of the ’295 patent also
14 indicate that the application program initiates the search on a background thread.”).

15 Second, CoolIT asserts that the figures of the ’330 Patent (specifically FIGS. 1 & 3, which
16 depict different views of a fluid heat exchangers and are reproduced below) are “consistent with
17 the testimony of CoolIT’s expert explaining that the ‘[o]pening 114 is the bottom surface of the
18 inlet header[112, which] is a volume . . . , and at the bottom of this volume . . . is the plane that
19 defines the inlet opening[114].” CoolIT Systems, Inc.’s Reply Claim Construction Brief
20 (“CoolIT Reply Brief”) at 11, Docket No. 115 (quoting Pokharna Decl. at 108–09 (“I never said
21 openings [sic] 114 is inlet header [112]. I said opening 114 is an opening that is a surface at the
22 bottom of that inlet header. It’s a plane that is defining the bottom of the inlet header.”)).

23 ///

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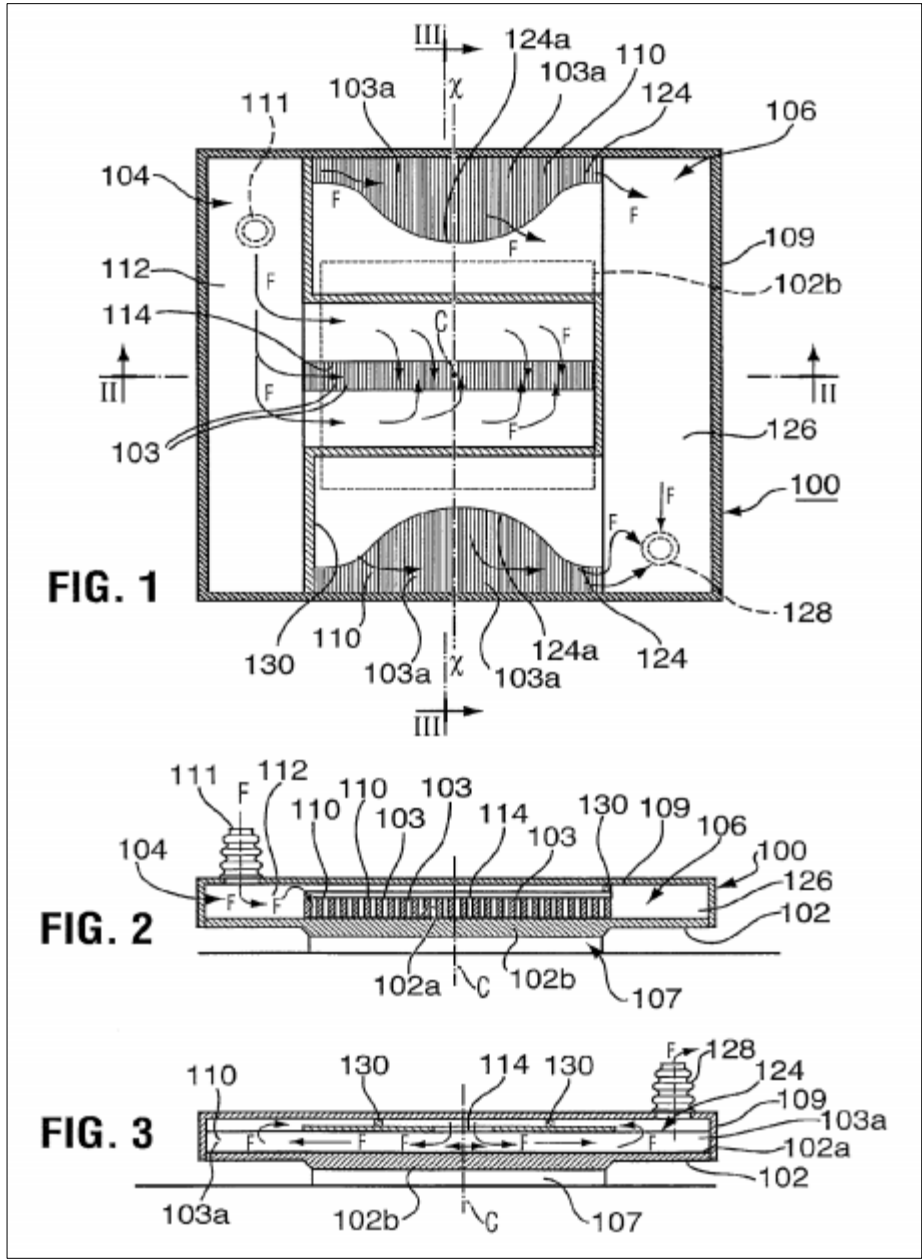
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Asetek contends that “Dr. Pokharna’s testimony . . . conflate[s] headers 112 and 126 with fluid inlet passage 104 and outlet passage 106” because the headers 112 and 126 (unlike the fluid inlet passage 104 and outlet passage 106) do not include the inlet and outlet openings 114 and 124. Asetek Response Brief at 18–19. However, as noted above, Dr. Pokharna clarified that “opening 114 is an opening that is a surface at the bottom of that inlet header.” Pokharna Decl. at 108–09. Thus, rather than being included in header 112, opening 114 is “a plane that is defining the bottom of the inlet header.” *Id.* That statement is consistent with the depiction in FIG. 3, which shows the opening 114 below the inlet header 112 and the opening 124 below the outlet header 126.

1 Asetek’s proposed construction is problematic for three reasons, as aptly explained by
 2 CoolIT: (1) “it potentially requires the ‘region’ to be directly connected to the ‘smaller channels,’
 3 whereas no such required restrictions are present in the term’s associated claim language or the
 4 relevant portions of the specifications or file histories of the CoolIT Patents,” CoolIT Opening
 5 Brief at 15, (2) “it is unclear what ‘smaller channels’ mean[s]” because the construction does not
 6 identify what they are smaller than or whether other channels are even being referred to, *id.*, and
 7 (3) “Asetek’s proposal leaves out the concept of ‘liquid’ completely,” which could be confusing,
 8 *id.* In addition, in the context of the claims, it would be confusing to use the term “region”
 9 because some of the claims in which the term appears also use the word “region,” such that the
 10 claim would end up with oddly redundant language, *e.g.*, Claim 1 (“wherein a region of [a region
 11 into which, or out from which, several smaller channels lead]”).

12 Accordingly, the Court adopts CoolIT’s proposed construction as consistent with both
 13 intrinsic and extrinsic evidence and will construe the various terms as noted in the chart above.

14 c. “adjacent [a first/the second] side of the fins / adjacent a [first/second] side
 15 of the [plurality of juxtaposed] fins / juxtaposed with a [first/second] side of
 16 the [plurality of juxtaposed] fins

18 Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
19 “adjacent [a first/the second] side of the fins” / 20 “adjacent a [first/second] side of the [plurality of juxtaposed] fins” 21 22 ’330 patent, claims 1 and 12	“next or close to”	ORIGINAL: “close to and alongside a first/second side of the plurality of fins” AMENDED: “next to a first/second side of the plurality of fins and without any intervening structure in between”	adjacent: “with no intervening solid structure between it and”
25 juxtaposed with a [first/second] side of the [plurality of juxtaposed] fins” 26 27 ’330 patent,	“placed next or close to”	ORIGINAL: “close to and alongside a first/second side of the plurality of fins” AMENDED:	juxtaposed with: “with no intervening solid structure between it and”

claims 14 and 15		This term should be construed the same as “adjacent”: “next to a first/second side of the plurality of fins and without any intervening structure in between”	
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The parties agree that the terms “adjacent” and “juxtaposed with” should be construed the same way; the key disagreement focuses on whether there can be anything in between things that are “adjacent” or “juxtaposed.”

The terms at issue appear in the ’330 Patent in the following claims:

- “A fluid heat exchanger comprising: . . . a seal extending between the housing and the plate positioned over the plurality of distal fin ends, wherein the elongate fluid inlet opening defined by the plate extends between a proximal end and a distal end, wherein a region of the inlet header is positioned **adjacent a first side of the fins** and a region of the outlet header is positioned **adjacent the second side of the fins**, and wherein the fins, the plate, the housing, and the seal are arranged such that the heat transfer fluid is directed from the inlet opening to the inlet header, through the elongate fluid inlet opening defined by the plate and into the microchannels, from the microchannels to the outlet header, and from the outlet header to the outlet defined by the housing.” ’330 Patent at 7:40 and 8:12–25 (Claim 1).
- “A fluid heat exchanger comprising: . . . a housing spaced apart from the plate, wherein the housing has an inlet aperture and an outlet aperture, wherein the inlet aperture opens to an inlet header region positioned **adjacent a first side of the plurality of juxtaposed fins** and the outlet aperture opens from an outlet header region positioned **adjacent a second side of the plurality of juxtaposed fins** opposite the first side of the plurality of fins, and wherein the elongate aperture of the plate extends away from the inlet header region transversely relative to the plurality of juxtaposed fins.” *Id.* at 9:16 and 9:28–37 (Claim 12).
- “A fluid heat exchanger comprising: . . . a housing having an inlet and an outlet, wherein the inlet opens to an inlet header region juxtaposed with a first side of the plurality of juxtaposed fins, and wherein the outlet opens from an outlet header region **juxtaposed with a second side of the plurality of juxtaposed fins**, wherein the first side and the second side are positioned opposite relative to each other and wherein the inlet to the microchannels defined by the apertured plate extends between the first side and the second side at a position between the first ends and the second ends.” *Id.* at 9:48 and 9:56–10:2 (Claim 14).
- “A fluid heat exchanger according to claim 14, wherein the inlet header region **juxtaposed with a first side of the plurality of juxtaposed fins** constitutes a first portion of an inlet header, wherein a second portion of the inlet header extends transversely over the microchannels.” *Id.* at 10:11–16 (Claim 15).

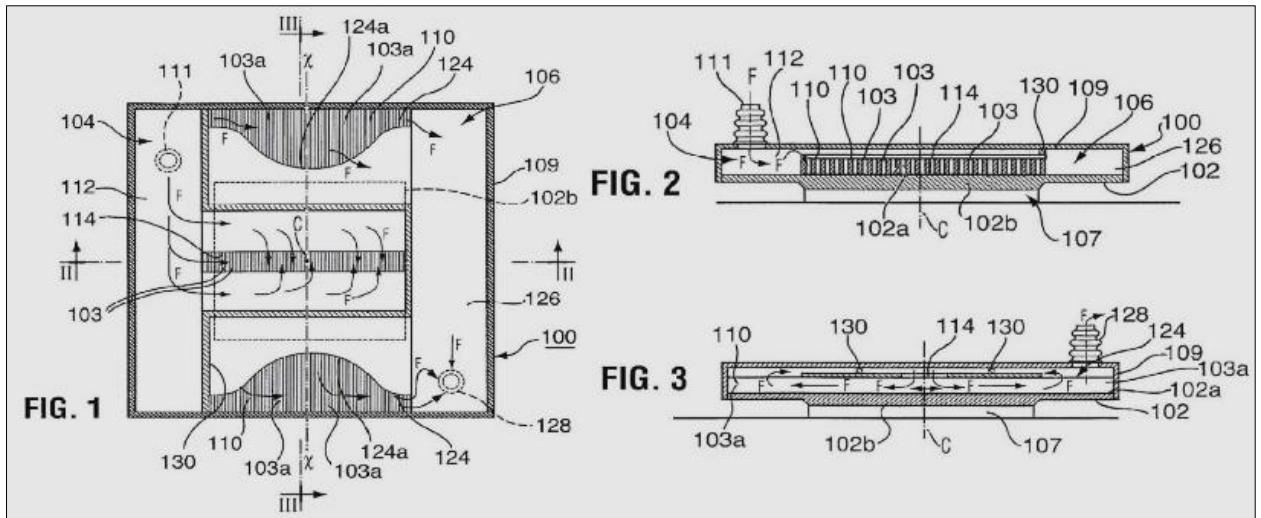
As pointed out by CoolIT, there are several places in the specification of the ’330 Patent in which the word “adjacent” is used, but where it could not be read to mean “alongside.” CoolIT Opening Brief at 16. One example involves FIGS. 1–3, which are described, in relevant part, as

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1 follows:

2 Fluid inlet opening 114 may be positioned adjacent to the known
3 intended heat generating component contact region 102b since this
4 region of the heat spreader plate may be exposed to greater inputs of
5 thermal energy than other regions on plate 102. Positioning the fluid
6 inlet opening adjacent region 102b seeks to introduce fresh heat
7 exchanging fluid first and directly to the hottest region of the heat
8 exchanger. The position, arrangement and/or dimensions of opening
9 114 may be determined with consideration of the position of region
10 102b Such that opening 114 may be placed adjacent, for example
11 orthogonally opposite to, or according to the usual mounting
12 configuration above, the intended heat generating component contact region
13 102b on the heat plate.

9 '330 Patent at 4:31–43; *see also id.* at 10:2-7 (“The position, arrangement and/or dimensions of
10 opening 114 may be determined with consideration of the position of region 102b such that
11 opening 114 may be placed adjacent, for example orthogonally opposite to, or according to the
12 usual mounting configuration above, the intended heat generating component contact region
13 102b on the heatplate.”).



23 CoolIT makes two persuasive arguments from these descriptions and diagrams. First, the
24 '330 Patent says that the “[f]luid inlet opening 114 may be positioned **adjacent** to the known
25 intended heat generating component contact region 102b”; but the diagrams show that it is not
26 “alongside” the “heat generating component contact region 102b.” Second, and relatedly, the
27 embodiment in FIGS. 1–3 “is claimed in claim 4 of the '330 patent,” and therefore that adopting
28 Asetek’s construction (which includes the “alongside” requirement) would exclude a preferred

1 embodiment, a strongly disfavored result. *Id.* at 17 (citing *Dow Chem. Co. v. Sumitomo Chem.*
 2 *Co.*, 257 F.3d 1364, 1378 (Fed. Cir. 2001) (“it is also well established that a claim construction
 3 that excludes a preferred embodiment is rarely, if ever, correct.” (internal quotation marks
 4 omitted))).

5 In addition, both parties are faced with the fact that they advanced contrary positions
 6 during *inter partes* review of the ’330 Patent. As CoolIT points out, during that proceeding
 7 counsel for Asetek engaged in the following exchange:

8 **JUDGE WEATHERLY [of the Patent Trial and Appeal Board]:**
 9 Or how do you know whether a cow is adjacent to an egg if there’s a
 fence in between? Does that mean they are still adjacent?

10 **MS. BHATTACHARYYA [representing Asetek]:** So, yes, Your
 11 Honor, a cow would be adjacent to an egg. I mean, if there are --in
 12 that context, we will only have to look at *proximity*. And it’s in the
 context if they are close together, close with each other, they would
 still be adjacent.

13 CoolIT Opening Brief at 18 (emphasis added). Ms. Bhattacharyya’s comment weakens Asetek’s
 14 current position that being “adjacent” requires something to be “alongside” something else;
 15 proximity appeared sufficient. On the other hand, Asetek points out:

16 Specifically, CoolIT argued during the IPR that “adjacent” should
 17 be construed as “next to.” Opp. Ex. 10 [Patent Owner Response] at
 3. CoolIT further distinguished “close to” (Asetek’s proposal in the
 18 IPR) from “next to” by asserting that the claimed invention and the
 prior art devices are “thin,” so “everything is somewhat close to
 each other.” Opp. Ex. 11 [IPR trial transcript], 23:19-24:47. The
 19 Board agreed with CoolIT, finding that “[b]ecause all elements of
 thin fluid heat exchangers can be considered relatively close to each
 20 other due to the small size of these devices,” “‘adjacent’ in the ’330
 patent must mean something more than ‘close to or nearby’ as
 21 asserted by [Asetek].” Opp. Ex. 12 [Final Written Decision] at 11-
 12. The Board accordingly ruled that “adjacent” should be construed
 22 as “next to.” *Id.* at 12. As a result, even if “adjacent” could warrant a
 broader definition, such as “close to,” CoolIT disclaimed such a
 23 broad meaning by arguing to the Board that “adjacent” should mean
 “next to.”

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 25 Asetek Response Brief at 25–26. In addition, in order to distinguish prior art reference (Kang),
 26 CoolIT argued in IPR (both in its briefing at all oral argument) that “Kang’s inlet section 31 is not
 27 positioned adjacent those fins, but rather is spaced from those fins with an intervening flow
 28 distributor 40 positioned between the inlet section 31 and the fins 14.” *Id.* at 27 (citing Opp. Ex.

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10 [Patent Owner Response] at 17) (emphasis removed); *see also id.* (citing Opp. Ex. 11 [IPR Trial Transcript], 23:19-24:47, 27:11-29:7). These prior comments indicate that permitting something physical, *e.g.* a flow distributor, to be positioned between two things considered to be “adjacent” would be improper.

In light of the specifications and the parties’ prior arguments, the Court adopts the construction “with no intervening solid structure between it and” for both the term “adjacent” and the term “juxtaposed with.”

- d. inlet opening/ inlet [to the microchannels / elongate] aperture/ [elongate inlet] aperture/aperture/opening positioned over the groove

Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
“inlet opening”/ “inlet [to the microchannels]” ’330 patent, claims 1, 2, 4, 6, and 14 ’284 patent, claims 1 and 15	Plain and ordinary meaning or “inlet” means “liquid entrance” Plain and ordinary meaning or “inlet opening” means “gap for a liquid entrance”	“passage through the entire thickness of the plate extending across the microchannels”	Plain and ordinary meaning.
“[elongate] aperture”/ “[elongate inlet] aperture”/“aperture” ’330 patent, claim 12 ’284 patent, claim 29 ’266 patent, claim 13	Plain and ordinary meaning or “aperture” means “hole or gap”	“passage through the entire thickness of the plate extending across the microchannels”	Plain and ordinary meaning.
“opening positioned over the groove” ’567 patent, claims 1 and 28	Plain and ordinary meaning or “gap located above the groove”	“passage through the entire thickness of the plate over the length of the groove”	Plain and ordinary meaning.

The key disagreement here is whether the opening 114 extends across the entire width of the microchannels, *i.e.* whether the opening extends from one side of the collection of

1 microchannels all the way to the other side of the collection of microchannels. For each term,
2 Asetek seeks to construe the terms as “passage” and to add “through the entire thickness of the
3 plate extending across the microchannels.”

4 By way of example, the terms appear in, *inter alia*, the following places in the claims:

- 5 • “A fluid heat exchanger comprising: . . . a plate positioned
6 over the juxtaposed fins and the corresponding plurality of
7 juxtaposed microchannels, wherein the plate defines an
8 **elongate aperture** extending transversely relative to each of
9 the plurality of juxtaposed microchannels, wherein the
10 **elongate aperture** is positioned between the first ends and
11 the second ends of the plurality of juxtaposed microchannels
12 . . .” ’330 Patent at 9:16, 21–27 (Claim 12).
- 13 • “A fluid heat exchanger comprising: . . . an apertured plate
14 overlying the microchannels and defining an **inlet to the**
15 **microchannels** and an outlet from the microchannels; . . .”
16 *Id.* at 9:48, 53–55 (Claim 14).
- 17 • “A heat exchange system comprising: . . . a compliant
18 member matingly engaged with the second side of the
19 housing member, wherein the compliant member at least
20 partially defines an **opening positioned over the groove . . .**
21 **.”** ’567 Patent at 19:16, 19:23–26 (Claim 1).

22 To advance its argument regarding construction of these terms, Asetek points to language
23 in the claims of the ’330 Patent, including to the language quoted as examples of the contested
24 terms above. *See* Asetek Response Brief at 13–14. It contends that this language shows that the
25 opening 114 extends over *all* of the microchannels, which makes its proposed construction
26 appropriate. However, the language of the claims makes Asetek’s proposed construction
27 unnecessary and its argument unpersuasive. As shown above, the language of the claims already
28 specifies that the opening extends over *each* of the microchannels: “the plate defines an elongate
aperture extending transversely relative to **each** of the plurality of juxtaposed microchannels,”
’330 Patent at 9:17–20, “an elongate inlet opening to the microchannels and defining an inlet flow
path **to each respective microchannel** at a position between the respective first ends and the
respective second ends,” ’284 Patent at 9:23–26, and “an elongate recess positioned over and
extending coextensively with the transverse groove to at least partially define an inlet manifold
opening to **each of the microchannels**,” ’567 Patent at 22:15–18. This language shows that there
is already a limitation implied by the word “each” in the claim language. Thus, there is no need or
reason to incorporate such a limitation into construction of the term.

1 To the extent that Asetek contends that there is no representation or description of the
2 invention in which the inlet, inlet opening, or aperture “introduces cooling liquid into each of the
3 microchannels but without extending across each of them” *id.* at 14, the Court notes that the
4 specification of the ’330 Patent states: “Opening 114 may extend over any channel 103 through
5 which it is desired that heat exchange fluid flows. Openings 114 may take various forms
6 including, for example, various shapes, various widths, straight or curved edges (in plane or in
7 section) to provide fluid flow features, open area, etc., as desired.” ’330 Patent at 4:62–67.
8 Although the fact that the opening can take a wide variety of forms is not inherently inconsistent
9 with the idea that the opening would extend across all the microchannels, this description suggests
10 the patent does not contemplate a narrow or limited conception of the opening. Accordingly, the
11 Court finds it inappropriate to import Asetek’s proposed limitation from the specification. *See*
12 *Teleflex*, 299 F.3d at 1328 (noting that the district court “erred by importing the . . . limitation
13 from the specification into the claim”).

14 Asetek notes that in the prosecution history of the ’567 Patent:

15 [T]he examiner noted in the Notice of Allowance that the closest
16 prior art of record, Nelson (U.S. Patent No. 4,909,315), did not teach
17 a compliant member having ‘an opening positioned over every fin
18 and distribute fluid transverse to the fins and then parallel to the
19 fins.’ The examiner clearly understood the inlet opening in the
20 compliant member as extending over every fin 400, and thus
21 coextensive with groove 325 on the fins, and allowed the claims
22 because this claimed feature was purportedly not taught by the prior
23 art.

24 Asetek Responsive Brief at 17 (citing Opp. Ex. 9 [Notice of Allowance] at 7-8). It asserts that, in
25 light of this history, “CoolIT should not be allowed to depart from the examiner’s understanding
26 of the opening in the complaint member and the resulting reason for allowance of the patent
27 claims.” *Id.* However, the Court is aware of no case in which the comments of an examiner were
28 found to evince disclaimer by the inventor, where those comments were not shown to be induced
by the patent applicant’s representative; the requirements of disclaimer are rigorous, and it is
typically the inventor’s own statements that are found to evince disclaimer. *See, e.g., Omega
Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003) (finding disclaimer where the
examiner rejected some claims as obvious and “the patentee attempted to overcome the prior art

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1 by proffering a narrower meaning of the function performed”); *Spectrum Int’l, Inc. v. Sterilite*
 2 *Corp.*, 164 F.3d 1372, 1378 (Fed. Cir. 1998) (“explicit statements made by a patent applicant
 3 during prosecution to distinguish a claimed invention over prior art may serve to narrow the scope
 4 of a claim”). Asetek points to no statement by the inventor during the patent prosecution on this
 5 point. Accordingly, Asetek’s prosecution history arguments are not persuasive.

6 In light of the above analysis and because the terms are not difficult to understand, these
 7 terms will be given their plain and ordinary meaning.

8 e. outlet opening

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10 Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
11 “outlet opening” 12 ’330 patent, claim 1 13 14 ’284 patent, claims 1 and 29 15 16 ’266 patent, claim 15	Plain and ordinary meaning or “gap for a liquid exit”	ORIGINAL: “portions of the microchannels not covered by the plate and where the fluid exits the microchannels” AMENDED: “portions above the microchannels not covered by the plate and where the fluid exits the microchannels”	Plain and ordinary meaning.

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 22 The key disagreement here tracks the debate regarding the previous terms and pertains to
 23 whether the term “outlet opening” (which describes where the fluid leaves the microchannels)
 24 refers only to the area of the microchannels not covered by the plate. By way of example, the term
 25 appears in, *inter alia*, the following claims:

- 26 • “A fluid heat exchanger comprising: . . . a plate positioned over the distal ends of
 27 the plurality of fins and the corresponding plurality of microchannels to close off
 28 the plurality of microchannels adjacent the distal ends of the plurality of fins,
 wherein the plate positioned over the plurality of distal fin ends defines an elongate
 fluid inlet opening overlying and extending transversely relative to the plurality of

1 microchannels between the plurality of microchannel first ends and opposite ends,
 2 wherein the plate is so positioned over the plurality of fins as to define a first fluid
 3 **outlet opening** from each microchannel in the plurality of microchannels at each of
 4 the microchannel first ends and an opposite fluid **outlet opening** from each
 5 microchannel in the plurality of microchannels at each of the microchannel
 6 opposite ends . . .” ’330 Patent at 7:40, 7:56–8:3.

- “A fluid heat exchanger for cooling an electronic device, the heat exchanger comprising: . . . an **outlet opening** in fluid communication with each of the microchannel first ends, wherein a corresponding outlet flow path from each of the microchannel first ends is positioned laterally outward of the plate relative to the inlet flow path to the respective microchannel . . .” ’284 Patent at 7:55, 7:66–8:3.

7 Asetek contends that the term “outlet opening” “is not entitled to a plain and ordinary
 8 meaning because this term is [not just informed by but] defined in the specification, and thus must
 9 be construed according to the usage of the term in the context of the specification.” Asetek
 10 Responsive Brief at 33 (citing *Phillips*, 415 F.3d at 1321 (“[T]he specification is ‘the single best
 11 guide to the meaning of a disputed term,’ and that the specification ‘acts as a dictionary when it
 12 expressly defines terms used in the claims or when it defines terms by implication.’)). In support
 13 of this contention, Asetek cites to several portions of the specification of the ’330 Patent. First, it
 14 notes that specifications “specifically identify ‘fluid outlet openings 124’ through which cooling
 15 liquid ‘exit’ the microchannels” and that “[t]he specifications further explain that ‘the fluid outlet
 16 openings 124 will generally be *positioned above the microchannels* 103 such that fluid may flow
 17 from the channels upwardly through openings 124.” *Id.* at 34 (citing ’330 Patent at 5:13–20; ’284
 18 Patent at 5:25–32; ’266 Patent at 10:46–53) (emphasis in brief but not patent). It also notes that
 19 “the specifications describe that outlet opening 124/224 is formed by removing portions of the
 20 plate.” *Id.* Finally, it notes that the illustrations show that “outlet openings 124 are formed by
 21 removing portions of the plate installed over the microchannels and that cooling liquid exits the
 22 microchannels through outlet openings 124.” *Id.* In contends that these excerpts from the
 23 specifications demonstrate that the specification defines “outlet openings” as “portions above the
 24 microchannels not covered by the plate and where the fluid exits the microchannels.”

25 Asetek also marshals the following excerpt from the deposition of Dr. Pokharna, CoolIT’s
 26 expert:

27 **BY MS. BHATTACHARYYA:**

28 **Q.** Where in Figure 1 of the ’330 patent is the first fluid outlet opening from each microchannel –

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MR. CHEN: Objection. Form.

BY MS. BHATTACHARYYA:
Q. – the plurality of microchannels?

BY DR. POKHARNA:

A. So that's the section that is marked what seems like 103A, the region of microchannels that is not covered by plate and where the fluid or liquid is exiting these microchannels.

Q. So the portions of the microchannels not covered by the plate and where the fluid exits the microchannels is the outlet opening, correct?

MR. CHEN: Objection. Form.

THE WITNESS: So in this embodiment, the outlet from the channels is the portion of the plate that is not covering the microchannels.

Asetek Response Brief at 35–36.

However, these arguments are unpersuasive for several reasons. First, FIG. 1 (which forms the basis of this line of questioning) is only one possible illustration of the invention. As CoolIT points out, FIG. 3 of the '330 Patent shows an alternative embodiment in which the outlet openings are “on the sides of the microchannels as opposed to being above the microchannels” because “the walls (i.e., fins) 110 do not extend all the way to the inside boundaries of the device and are covered above entirely by the plate.” CoolIT Reply Brief at 23. In addition, the first claim language cited by Asetek states that “the fluid outlet openings 124 will *generally* be positioned above the microchannels 103”; it does not say that such positioning will *always* be the case. Likewise, while the specification does discuss removal of portions of the plate, it is not clear that removal of portions of the plate will *always* define the outlet opening. Thus, Asetek impermissibly asks the Court to import limitations from the specification to the claims. *See, e.g., Teleflex*, 299 F.3d at 1328 (noting that the district court erred by important a limitation from the specification into the claim).

In light of this analysis, the Court will give this term its plain and ordinary meaning.

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f. at least partially

Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
“at least partially” '567 patent, claims 1 and 28	“at least in part”	Indefinite.	Plain and ordinary meaning.

The dispute here focuses on whether the term at issue is indefinite; Asetek alleges that “CoolIT is attempting to rewrite the claim language for the sole purpose of attempting to avoid Asetek’s contention that this phrase renders claims 1 and 28 of the ’567 patent indefinite.” Asetek Response Brief at 36.² CoolIT asserts that the term “at least partially” is not indefinite because “a person of ordinary skill in the art would have understood it to have a plain and ordinary meaning of ‘at least in part’ with reasonable certainty.” CoolIT Opening Brief at 21.³

The terms appear in the following claims:

- “A heat exchange system comprising: . . . a compliant member matingly engaged with the second side of the housing member, wherein the compliant member at least partially defines an opening positioned over the groove, wherein the compliant member and the groove together define a portion of an inlet manifold configured to hydraulically couple in parallel each of the microchannels to at least one other of the microchannels, and wherein the housing member further defines a portion of an inlet plenum” ’567 at 19:16–31 (Claim 1).
- “A heat exchange system comprising: . . . a compliant member sealingly engaged with the second side of the housing member, wherein the compliant member at least partially defines an opening positioned over the groove and in alignment with the inlet plenum, wherein the compliant member defines an elongate recess positioned over and extending coextensively with the transverse groove to at least partially define an inlet manifold opening to each of the microchannels” *Id.* at 22:1–14.

Both parties agreed that a determination about indefiniteness need not be made at this juncture. *See* CoolIT Opening Brief at 21 (citing *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522

² “A claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope.” *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1383–84 (Fed. Cir. 2005) (citing *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991)).

³ At the hearing, CoolIT also explained that the term “at least partially” means that a particular structure forms “a part of” another structure.

1 F.3d 1299, 1307 (Fed. Cir. 2008)) (“[T]he Court does not need to deal with invalidity issues such
 2 as indefiniteness during claim construction.”); Asetek Response Brief at 38 (“Asetek does not
 3 disagree that the Court can evaluate the merits of Asetek’s indefiniteness positions at a later
 4 date.”). Indeed, Asetek conceded at the hearing that a jury will be able to understand this term
 5 because it is not technical or complicated, but is a “common” word in the English language.
 6 Asetek instead asserts that the confusion the term would cause stems from the term’s alleged
 7 indefiniteness.

8 At this time, the Court declines to find the term indefinite, although that determination is
 9 without prejudice, and Asetek may renew its challenge at an appropriate time. In addition,
 10 declines to construe this term, as a jury will be able to understand its plain and ordinary meaning.

11 g. inlet/outlet flow path

Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
“inlet/outlet flow path” ’284 patent, claims 1 and 15	Plain and ordinary meaning or “an inlet/outlet path through which the liquid flows”	ORIGINAL: “portions of the microchannels not covered by the plate and where the fluid enters or exits” AMENDED: “portions above the microchannels not covered by the plate and where the fluid enters or exits the microchannels” CoolIT’s construction is indefinite	Plain and ordinary meaning.

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24 The dispute as to this term parallels the dispute related to the term “outlet opening,” as it
 25 pertains to whether the term must refer to portions of the microchannels not covered by the plate.
 26 In fact, Asetek’s proposed constructions, which seek to limit the claim, are essentially the same for
 27 “outlet flow path” and “outlet opening.”
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1 As an example, the term appears in the following part of Claim 1:

- 2 • “A fluid heat exchanger for cooling an electronic device, the heat exchanger
3 comprising: . . .
4 an elongate inlet opening in fluid communication with each of the
5 microchannels, wherein an **inlet flow path** to each respective microchannel
6 is positioned between the respective first ends and second ends;
7 an outlet opening in fluid communication with each of the microchannel first
8 ends, wherein a corresponding **outlet flow path** from each of the
9 microchannel first ends is positioned laterally outward of the plate relative
10 to the **inlet flow path** to the respective microchannel, wherein the plurality
11 of spaced-apart walls comprises a first outermost wall and a second
12 outermost wall spaced apart from and opposite the first outermost wall
13 relative to the plurality of microchannels, wherein the **outlet flow path**
14 from a centrally positioned microchannel first end positioned between the
15 first outermost wall and the second outermost wall is larger than the **outlet**
16 **flow path** from another microchannel first end positioned adjacent the first
17 outermost wall, the second outermost wall, or both;
18 a housing positioned over and spaced apart from the plate, wherein the housing
19 has an inlet port and an outlet port spaced apart from each other, wherein
20 the inlet port is in fluid communication with each respective **inlet flow path**
21 and the outlet port is in fluid communication with each respective **outlet**
22 **flow path** from the microchannel first ends; and
23 a seal extending between the housing and the plate and separating the **inlet flow**
24 **path** to each of the microchannels from the **outlet flow path** from each of
25 the micro channel first ends, wherein each respective **inlet flow path** is split
26 generally into two subflow paths, wherein one of the subflow paths extends
27 outwardly toward the corresponding microchannel first end and passes
28 outwardly of the plate along the **outlet flow path** from the respective
microchannel first end.” ’284 Patent at 7:55–56; 7:62–8:30 (Claim 1).

17 Asetek contends that that term is vague and ambiguous and that, without its proposed
18 limitation, there is no identification of the beginnings of ends of the flow path. However, as
19 explained below, there is no need to add additional limitations to the claim language, and to do so
20 would contravene the rule against importation of limitations from the specification.

21 First, Asetek contends that “one of ordinary skill would understand ‘inlet flow path’ to
22 mean the openings 114/214 formed by the elongate cutout in the plate through which cooling
23 liquid enters the microchannels. Similarly, one of ordinary skill would understand ‘outlet flow
24 path’ to mean the scalloped-shaped cutouts 124/224 through which cooling liquid exits the
25 microchannels.” Asetek Response Brief at 38 (citing ’284 Patent at 4:11–15; 4:27–42; 5:13–20,
26 5:25–37, FIGS. 1, 4, and 5). However, while openings 114/214 and 124/224 are certainly
27 identified in those portions of the specification as openings through which fluid passes to enter or
28 exit the microchannels, the language of the claim makes that fact abundantly clear. The claim

1 describes the relevant parts as being “in fluid communication,” and the term “flow path” itself
 2 shows that liquid is moving through these component parts. Second, as explained above in the
 3 context of the term “outlet opening,” there is no reason to import Asetek’s proposed limitation that
 4 the “inlet/outlet flow paths” be only the “portions of the microchannels not covered by the plate.”
 5 To conclude otherwise would be to impermissibly import limitations from the specification.

6 Thus, as with the term “outlet opening,” the term “inlet/outlet flow path” will be given its
 7 plain and ordinary meaning.

8 h. seal / seal extending between the housing and the (apertured) plate / seal
 9 extending between the plate and the housing

Claim Term	CoolIT’s Proposed Construction	Asetek’s Proposed Construction	Court’s Construction
12 “seal / seal extending between the housing and the (apertured) plate / seal extending between the plate and the housing” 13 14 15 16 ’330 patent, claims 1, 12, 14 17 18 ’284 patent, claims 1, 15, 29 19 20 ’266 patent, claim 13 21	“a component that fills a gap to prevent leakage through the gap”	ORIGINAL: The entire phrases should be construed as “the housing and the plate are fitted so that fluid cannot flow out from between them” AMENDED: “a component <u>separate from the plate or housing</u> that fills a gap to prevent leakage through the gap”	“a component that fills a gap to prevent leakage through the gap”

22 After Asetek changed its proposed construction in response to CoolIT’s brief, the dispute
 23 regarding this term narrowed in focus to whether the term “seal” can refer to a feature of the plate
 24 or housing, or whether the seal must be *separate from* the plate or housing.

25 The term appears in, for example, the following claim contexts:

- 26 • “A fluid heat exchanger comprising: . . .
 27 a plurality of juxtaposed fins . . .
 28 a plate positioned over the juxtaposed fins . . .
 a housing spaced apart from the plate . . . and

1 a **seal extending between the housing and the plate** positioned over the
 2 plurality of distal fin ends, wherein the elongate fluid inlet opening defined
 3 by the plate extends between a proximal end and a distal end, wherein a
 4 region of the inlet header is positioned adjacent a first side of the fins and a
 5 region of the outlet header is positioned adjacent the second side of the
 6 fins, and wherein the fins, the plate, the housing, and the **seal** are arranged
 7 such that the heat transfer fluid is directed from the inlet opening to the
 8 inlet header, through the elongate fluid inlet opening defined by the plate
 9 and into the microchannels, from the microchannels to the outlet header,
 10 and from the outlet header to the outlet defined by the housing.” ’330
 11 Patent at 7:40–8:25 (Claim 1).

12 Turning first to the language of the claim, the Court notes that the “seal” is recited
 13 separately from the plate and the housing (and the plurality of juxtaposed fins). *Id.* While its
 14 separate status does not definitively dictate that the seal cannot be part of the plate or housing, the
 15 fact that the seal is not described as an aspect of either the plate or the housing, but it instead
 16 described as its own component, suggests that the seal is distinct from the plate and housing.

17 The specification is enlightening. For one thing, nothing in FIGS. 1-3 and 5 of the ’330
 18 Patent indicates that the seal *must* be separate from the plate and/or housing. *See also* CoolIT
 19 Reply Brief at 21 (“As can be seen in FIGS. 1-3 and 5 of the ’330 patent, the seal 130 is not
 20 separate from at least the plate.”). In addition, the specification describes FIG. 5 in part, by saying
 21 that the seal “may be installed *as a portion of plate* 240 or separately.” *Id.* at 22 (quoting ’330
 22 Patent at 7:5-6 (emphasis in brief but not in ’330 Patent)). Thus, the specification specifically
 23 contemplates that the seal may be something other than a standalone component; it could at least
 24 be an aspect of or a part of the plate. Accordingly, not only would it be a mistake to read a
 25 limitation from the specification into the claim, it appears that the specification itself disclaims
 26 such a limitation.

27 Lastly, Asetek argues that CoolIT disclaimed its current position (that the seal need not be
 28 a separate component) during IPR of the ’330 patent. Asetek Response Brief at 29.

During the IPR of the ’330 patent, Asetek contended that the claims of the ’330 patent were rendered invalid by the Kang reference. Kang disclosed two components (cover 20 and flow distributor 40) that were tightly fitted together in a fluid-tight manner, which Asetek contended met the “seal” element in the claims of the ’330 patent. CoolIT disagreed and distinguished Kang by arguing to the Board that “Kang simply does not disclose any structure that could be considered as a seal extending between the cover 20 and the flow distributor 40 – they are in direct contact as shown [in CoolIT’s

1 annotated Kang Fig. 3 at p. 27, supra].”

2 *Id.* (citing Opp. Ex. 10 [CoolIT’s Patent Owner Response] at 17). Because “CoolIT argued that
3 said region of contact in ‘Kang lacks any structure that could be considered as being equivalent to
4 ‘a seal extending between the housing and the apertured plate,’” Asetek believes that CoolIT
5 “disclaimed from its claimed ‘seal’ the region of contact between the ‘plate’ and the ‘housing’
6 components for purposes of the ’330 patent at issue in the IPR.” *Id.* (citing Opp. Ex. 10 [CoolIT’s
7 Patent Owner Response] at 16). In response, CoolIT contends that it did not disclaim its current
8 position because the components in Kang were defined by the absence of any seal “structure,” and
9 the seal in the ’330 Patent can be a “structure” without being a separate component. In other
10 words, while the parts in Kang fit together in a fluid-tight way, the ’330 Patent contemplates a
11 specific feature or component that serves a sealing function. “[I]nvok[ing] the doctrine of
12 prosecution disclaimer” requires that any disclaiming statements “be both clear and
13 unmistakable.” *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017) (citations
14 omitted). There was no such clear and unmistakable disclaimer here. CoolIT’s position then is
15 not inconsistent with its current argument.

16 The Court adopts CoolIT’s proposed construction (“a component that fills a gap to prevent
17 leakage through the gap”) and declines to include the limitation that the seal must be separate from
18 the plate and/or housing.

19 **IV. CONCLUSION**

20 For the foregoing reasons, the Court construes the contested terms as follows:

21 Asetek Terms

- 22 • “double-sided chassis” – “two-sided frame”
- 23 • “a first end or a second end of the thermal exchange chamber” – plain and ordinary
24 meaning
- 25 • “stator”/ “stator... isolated from the cooling liquid” – “stationary parts of the motor
26 that perform or support an electrical or magnetic function of the motor”
- 27 • “intermediate member” – not a means-plus-function term

United States District Court
Northern District of California

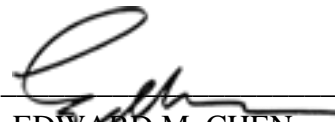
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CoolIT Terms

- “fluid heat exchanger” – “component that transfers heat from a heat source to a cooling liquid circulated by a pump that is external to the component”
- “[inlet/outlet] header” & “[inlet/exhaust] manifold” –
 - “inlet header”: “a space out from which the liquid to be distributed flows”
 - “outlet header”: “a space into which the collected liquid flows”
 - “inlet manifold”: “a space out from which the liquid to be distributed flows”
 - “exhaust manifold”: “a space into which the collected liquid flows”
- “adjacent” and “juxtaposed with ” – “with no intervening solid structure between it and”
- “inlet,” “inlet opening”, “aperture” – plain and ordinary meaning
- “outlet opening” – plain and ordinary meaning
- “at least partially” – plain and ordinary meaning; no determination regarding indefiniteness at this time
- “inlet/outlet flow path” – plain and ordinary meaning
- “seal” - “a component that fills a gap to prevent leakage through the gap”

IT IS SO ORDERED.

Dated: July 22, 2020



EDWARD M. CHEN
United States District Judge