

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

INTELLIGENT WATER SOLUTIONS,  
LLC,

*Plaintiff,*

v.

KOHLER CO,

*Defendant.*

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CASE NO. 2:16-CV-689

**MEMORANDUM OPINION AND ORDER**

Before the Court is the opening claim construction brief of Plaintiff Intelligent Water Solutions, LLC. (“Plaintiff”) (Dkt. No. 55, filed on April 12, 2017), the response of Defendant Kohler Co. (“Defendant”) (Dkt. No. 57, filed on April 26, 2017), and the reply of Plaintiff (Dkt. No. 59, filed on May 3, 2017). The Court held a claim construction hearing on May 24, 2017. Having considered the arguments and evidence presented by the parties, the Court issues this Claim Construction Order.

**Table of Contents**

**I. BACKGROUND..... 3**

**II. LEGAL PRINCIPLES ..... 4**

**III. CONSTRUCTION OF AGREED TERMS ..... 9**

**IV. CONSTRUCTION OF DISPUTED TERMS ..... 9**

    A. “system control means ...” ..... 10

    B. “microprocessor ...” ..... 18

    C. “programmable digital processor ...” ..... 21

    D. “remote system monitoring / control device ...” ..... 25

    E. “fluid supply control valve” and “fluid control valve” ..... 30

    F. “fluid supply control valve actuator ...” and “fluid control valve actuator ...” ..... 35

    G. “external data storage and input means ...” ..... 39

    H. “memory means ...” ..... 42

    I. “domestic water supply system” ..... 46

    J. “user interface input” ..... 49

**V. CONCLUSION..... 52**

## I. BACKGROUND

Plaintiff brings suit alleging infringement of United States Patent No. 6,286,764 (“the ’764 patent” or “patent-in-suit”) by the Defendant.

The application leading to the ’764 patent was filed on July 14, 1999 and issued on September 11, 2001. The ’764 patent is entitled “Fluid and Gas Supply System.” In general, the ’764 patent is directed to a fluid or gas delivery system that controls temperature, flow rate, and volume at a system outlet by controlling/regulating valves and/or flows. The Abstract of the ’764 patent states:

A fluid or gas delivery system is provided for controlling fluid or gas temperature, flow rate and volume at a system outlet. The system comprises single or double control valves for regulating flow of a first fluid or gas and a second fluid or gas from corresponding first and second fluid or gas sources into a mixing port, wherein the first fluid or gas has a different temperature from the second fluid or gas. A fluid or gas supply control valve actuator operatively connected to the first and second fluid or gas supply valves actuate opening and closure operations of the valves. A thermosensor thermally coupled with the mixing port senses an estimated present temperature of a mixed fluid or gas within the mixing port. A flow control valve regulates flow of a mixed fluid or gas at the system outlet. A flow control valve actuator operatively connected to the flow control valve actuates opening and closure thereof. A user interface including user input means for selecting a set temperature, flow rate and volume of fluid or gas at the system outlet is provided along with a user display for displaying one or more system functions or parameters. Control means are provided for receiving signals from the thermosensor and user interface and for processing the signals to generate appropriate control signals to control the fluid or gas supply control valve actuator and flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at the system outlet.

Claim 1 of the ’764 patent recites:

1. A fluid delivery system for controlling fluid temperature, flow rate and volume at a system outlet comprising:

a fluid supply control valve for regulating flow of a first fluid and a second fluid from corresponding first and second fluid sources into a mixing port, wherein said first fluid has a different temperature from said second fluid;

a fluid supply control valve actuator operatively connected to said fluid supply valve for actuating opening and closure operations thereof;

a thermosensor thermally coupled with said mixing port to sense an estimated present temperature of a mixed fluid within said mixing port;

a fluid control valve for regulating flow of a mixed fluid flow at said system outlet;

a flow control valve actuator operatively connected to said flow control valve for actuating opening and closure operations thereof;

a user interface including user input means for selecting a set temperature, flow rate and volume of fluid at said system outlet and user display means for displaying one or more system functions or parameters;

system control means for receiving signals from said thermosensor and user interface and for processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet; and

a remote system monitoring/control device operable for bidirectional data transmission and reception between said remote monitoring/control device and said system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters, wherein said remote monitoring/control device operates to remotely generate signals to remotely select said one or more system functions or parameters, and wherein said remote monitoring/control device also operates to receive signals from said system control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters.

## **II. LEGAL PRINCIPLES**

This Court's claim construction analysis is guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the

correct construction.” *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

Claim terms are generally given their ordinary and customary meaning, which “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read 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.* The written description set forth in the specification, for example, “may act as a sort of dictionary, which explains the invention and may define terms used in the claims.” *Markman*, 52 F.3d at 979. Thus, as the *Phillips* court emphasized, the specification is “the primary basis for construing the claims.” *Phillips*, 415 F.3d at 1314–17. However, it is the claims, not the specification, which set forth the limits of the patentee’s invention. Otherwise, “there would be no need for claims.” *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc).

The prosecution history also plays an important role in claim interpretation as intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Phillips*, 415 F.3d at 1314–17; *see also Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether

relied on by the examiner or not, are relevant to claim interpretation”). The prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the prosecution history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may sometimes lack the clarity of the specification and thus be less useful in claim construction. *Id.*

Courts are also permitted to rely on extrinsic evidence, such as “expert and inventor testimony, dictionaries, and learned treatises,” *id.* (quoting *Markman*, 52 F.3d at 980), but *Phillips* rejected any claim construction approach that sacrifices the intrinsic record in favor of extrinsic evidence. *Id.* at 1319. Instead, the court assigned extrinsic evidence, such as dictionaries, a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula or particular sequence of steps. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate weight to the sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant. “In cases where . . . subsidiary facts are in dispute, courts will need to make subsidiary factual findings about [the] extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction [discussed] in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent

claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120.

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347-49 (Fed. Cir. 2015) (en banc in relevant portion). Where a claim limitation is expressed in means-plus-function language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, § 112, ¶ 6 mandates that such a claim limitation “be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.” *Id.* (citing 35 U.S.C. § 112, ¶ 6).

“It is well settled that a claim limitation that actually uses the word ‘means’ invokes a rebuttable presumption that § 112, ¶ 6 applies. In contrast, a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112, ¶ 6 does not apply.” *Apex Inc. v. Raritan Comp., Inc.*, 325 F.3d 1364, 1371 (Fed. Cir. 2003) (citations omitted). The Federal Circuit elaborated that “[w]hen a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, ¶ 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Williamson*, 792 F.3d at 1349 (quotations omitted). “The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.*

When it applies, § 112, ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation

involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

For § 112, ¶ 6 limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). In such a case, the corresponding structure “is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (*quoting WMS Gaming*, 184 F.3d at 1349).



### III. CONSTRUCTION OF AGREED TERMS

The parties have agreed to the following meanings for the following terms. *See, e.g.*, Dkt.

No. 61 (Joint Claim Construction Chart.)

TERM	AGREED CONSTRUCTION
“flow rate”	“volume of fluid passing per unit time”
“volume”	“amount of fluid dispensed or delivered”
“user display means for displaying one or more system functions or parameters”	<p><u>Function</u>: displaying one or more system functions or parameters</p> <p><u>Structure</u>: visual readout; visual display; LCD display; graphic display, audio display, tactile display</p>
“user input means for selecting a set temperature, flow rate and volume of fluid at said system outlet”	<p><u>Function</u>: selecting a set temperature, flow rate and volume of fluid at said system outlet</p> <p><u>Structure</u>: external data processing device; keypad; user display; touchpad; joystick; roller; pen selector; voice input; optical input; image input coupled with optical recognition; menu-based input template; menu of selectable functions and parameters; control panel</p>
“data transfer means”	Plain and ordinary meaning
“laser control connection means”	Plain and ordinary meaning

Accordingly, the Court adopts the constructions agreed to by the parties as listed above.

### IV. CONSTRUCTION OF DISPUTED TERMS

The parties’ positions and the Court’s analysis as to the disputed terms are presented below.

A. “system control means ...”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
<p>Not a means-plus-function claim → Plain and ordinary meaning; In the alternative,</p> <p><u>Function</u>: receiving and processing signals</p> <p><u>Structure</u>: control unit; microprocessor, central processing unit, input-output inter-face, digital processor, controller, and memory</p>	<p>Means-plus-function limitation</p> <p><u>Function</u>: Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure</u>: standalone controller, single task control logic unit, microprocessor, digital processor control unit, or CPU, and structural equivalents thereof</p> <p>This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” Therefore, the claim is indefinite.</p>

The disputed term “system control means for receiving signals from said thermosensor and user interface and for processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet” appears in at least claims 1 and 26 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that the phrase recites sufficient structure to rebut any means-plus-function limitation application, and thus the term should be given its plain and ordinary meaning. (*See, e.g.,* Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 20-23.) Plaintiff argues that the “system control means” essentially instructs the “fluid supply control valve” and the “fluid control valve” to open or close to effectuate the set temperature, flow rate, or volume at the system outlet and that Defendant’s proposed function is overly expansive because it includes these structural

elements—the inputs, outputs, and connections—within the proposed function. (*Id.* at 21.) Plaintiff argues that general purpose computing components recited here (such as “for processing” and “for receiving”) are similar to the routine functions of “processing” and “receiving” that has previously been found by the Federal Circuit to simply require a general-purpose computer. (*Id.*) Plaintiff argues that various algorithms are disclosed in the specification to control system functions, which rebuts the charges by Defendant that the claim is indefinite for failure to set forth a particular algorithm. (*Id.* at 22.)

Defendant argues that the term is presumptively a means-plus-function limitation because it recites the term “means.” (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 7.) Defendant argues that the term “system control” or “system control unit” does not provide any definite structure. (*Id.* at 8-9.) Defendant argues that the “system control means” must do more than just receive and process signals. (*Id.* at 9.) As recited in the claims, Defendant argues that it must process the signals to perform a particular function, which requires special programming and a corresponding algorithm. (*Id.* at 9-10.) Defendant argues that while the specification provides an algorithm for achieving set temperature, it does not disclose an algorithm for flow rate or volume control, much less controlling all three parameters at once. (*Id.* at 10.) Because the specification does not disclose an algorithm for performing all of the recited function, then Defendant argues that the claim is indefinite. (*Id.* at 10-11.)

In its Reply, Plaintiff argues that there is no requirement in the claims that the claimed invention be capable of controlling all three parameters at once. (*See, e.g.*, Dkt. No. 59 at 2.) For the claimed invention, the simple opening and closing of a valve is readily controlled based on information found in the specification and claims. (*Id.* at 2-3.)

## **(2) Analysis**

The primary issue as to this term is whether it is a means-plus-function limitation. Further, if it is a means-plus-function limitation, the parties dispute the recited function and corresponding structure, as well as whether the term is indefinite for failure to provide required algorithms.

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also equally understood that a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Here, the disputed term recites “means,” and thus there is a presumption that it is a means-plus-function limitation.

The Court finds that the term “system control” does not have a well-understood structural meaning. The “system control” term does not recite any distinct structure, and the term does not modify the word “means” with any language that imparts structure. Similarly, the remaining language cited in the disputed term is primarily functional and does not describe sufficient structure to avoid a finding that the term is a means-plus-function limitation. The Court finds that the Plaintiff has not rebutted the presumption that the term is a means-plus-function limitation. On balance, the Plaintiff has not persuasively demonstrated that the disputed term refers to a particular class of structures or that the disputed term’s use of the word “system control” is structural rather than functional. Further, the disputed term does not contain a “recitation of ... operation in sufficient detail to suggest structure to persons of ordinary skill in the art.” *Linear Tech. Corp. v.*

*Impala Linear Corp.*, 379 F.3d 1311, 1320–21 (Fed. Cir. 2004). Thus, the term is a means-plus-function limitation governed by 35 U.S.C § 112 ¶ 6.

As for the recited function, the Court finds that the function provided by the Defendant is aligned with the claim language. The Court rejects Plaintiff’s argument that the recited function is merely “receiving and processing signals.” As expressly required in the claims, the system control means must do more than merely receive and process signals, and the Court finds that Plaintiff’s proposed construction would eliminate many of the functions expressly required in the disputed claim term.

As for the corresponding structure, the parties agree that the structure may be a microprocessor, a digital processor controller, and a central processing unit (CPU), but disagree as to each other’s proposed structures. The ’764 patent provides numerous examples for the “control unit 34,” which the parties agree corresponds to the “system control means...” term. For example, the specification mentions that it may be a “stand alone controller, a single task control logic unit, or a microprocessor.” ’764 patent at col. 6, ll. 34-37. The specification also mentions that the microprocessor can comprise a CPU that is operably connected with an input-output interface, random access memory (RAM), and read only memory (ROM). ’764 patent at col. 9, ll. 12-20. However, the fact that the microprocessor or CPU can be coupled to a memory or an input/output (I/O) interface does not necessarily mean that the corresponding structure is limited to only memory or an I/O interface as proposed by Plaintiff. Indeed, the Court is not convinced that simply an I/O interface or memory – by itself – would be able to perform the recited function without being coupled to a CPU or microprocessor. Thus, the Court rejects Plaintiff’s proposed construction for the corresponding structure. The Court finds that Defendant’s proposed construction is consistent with that disclosed in the specification.

The Court finds that the recited function requires more than just a general purpose computer and must include an algorithm for performing the function. *See, e.g., WMS Gaming*, 184 F.3d at 1349; *Aristocrat Techs.*, 521 F.3d at 1333; *Triton Tech of Texas, LLC v. Nintendo of America, Inc.*, 753 F. 3d 1375 (Fed. Cir. 2014). The Court rejects Plaintiff’s arguments to the contrary. To the extent an algorithm is required, the parties dispute the presence (and extent) of algorithms disclosed in the specification.

Defendant argues that the term is indefinite because the specification does not disclose an algorithm for performing the recited function. While the parties seem to agree that the specification discloses the use of an algorithm for temperature control (*see, e.g.,* Figures 2A, 2B, 6), the parties dispute whether the disclosed algorithms can be applied for flow rate and volume and whether additional algorithms are needed to perform the entire recited function. The specification expressly mentions that a variety of feedback algorithms may be used to control system functions, such as “proportional, proportional plus integral, proportional plus integral plus derivative, feed forward, or other suitable control algorithm types.” ‘764 patent, col. 9, ll. 34-38. However, Defendant argues that the specification only discloses a “class” of algorithms and not specific algorithms, and relies on *Triton Tech of Texas, LLC v. Nintendo of America, Inc.*, 753 F. 3d 1375 (Fed. Cir. 2014). The Court disagrees. While the generic term “feedback algorithm” – by itself – may indeed disclose a class of algorithms, the Court finds that the specification further lists specific feedback control algorithms, in particular “proportional, proportional plus integral, proportional plus integral plus derivative, and feed forward” algorithms. ‘764 patent, col. 9, ll. 36-38. The listing of specific algorithms goes beyond the listing of a “class” of algorithms.

The Defendant then argues that the patent specification does not mention the details on these specific algorithms and whether these specific algorithms were known to one of skill in the

art. While its position is a little unclear, Defendant never argues that these specific algorithms were not well known, but instead merely argues that the patent specification does not specifically state that the specific algorithms are well known or provide details on those algorithms. The Court finds that Defendant has not met its burden to show that the specific algorithms were not known at the time of the filing of the application leading to the '764 patent. Based on Plaintiff's representations that the algorithms are well known, the specification's reference that "other adaptive algorithms are well known in the art" (col. 9, ll. 44-46), and the Defendant's lack of evidence suggesting otherwise, the Court finds that the specifically referenced algorithms represent more than a generic class.

The listing of specific algorithms (as was done in the '764 patent) is different than *Triton Tech*, in which the court found that the term "numerical integration" is not an algorithm but is instead an entire class of different possible algorithms used to perform integration and is hardly more than a restatement of the integrating function itself. *See Triton Tech*, 753 F. 3d at 1378-79. *Triton Tech* distinguishable at least in the absence of expert testimony or other evidence from Defendant. Accordingly, the Court rejects Defendant's indefiniteness arguments that the '764 patent does not disclose algorithms.

Further, the disclosed algorithms are not limited to temperature control, as the specification mentions that feedback control algorithms can be used generally for control system functions (*e.g.*, valve function) and other fluid output parameters. *See, e.g.*, '764 patent, col. 9, ll. 33-49; *see also* col. 7, ll. 32-43, col. 11, ll. 16-34. Further, the specification makes clear that feedback control algorithms may be used to control and regulate target temperatures, flow rates, and desired volumes. '764 patent, col. 9, ll. 21-32. While controlling and regulating temperatures is one parameter controlled in the embodiments of the specification, the specification references using

feedback control algorithms for a variety of parameters, including temperature, flow rate, and volume. Thus, the Court rejects Defendants argument that the '764 patent does not clearly link the disclosed algorithms to the “flow rate” and “volume” parameters listed in the recited function as opposed to just the “temperature.” Further, the Court is not persuaded by the Defendant’s selective citation to inventor testimony. Accordingly, the Court rejects Defendant’s indefiniteness arguments that the '764 patent does not disclose algorithms for performing the entire recited function.

The use of feedback algorithms is also discussed elsewhere in the specification. *See, e.g.*, '764 patent col. 7, ll. 32-43; col. 9, ll. 21-32. During the claim construction hearing, the Plaintiff only objected to the Court’s preliminary construction for this term to the extent it did not also include the corresponding structure listed in col. 7, ll. 32-57. While that citation is related (at least in part) to feedback control algorithms and the general processing of signals, this general description does not list specific algorithms that can perform the recited function and only generally relates to feedback algorithms and control of the system. Thus, the Court rejects Plaintiff’s argument that the specification at col. 7, ll. 32-57 is clearly linked as corresponding structure to the recited function.

“It is certainly true that an algorithm can be expressed in many forms, including flow charts, a series of specific steps, mathematical formula, prose, and so on.” *See Triton Tech*, 753 F.3d at 1379 (*quoting Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008).) Besides the specific algorithms recited in column 9 of the '764 patent, the '764 patent also provides various flow charts showing specific steps that can be implemented to control temperature. *See, e.g.*, Figures 2A, 2B, and 6. While these flowcharts are directed to temperature control, the Court finds that these flow charts are effectively algorithms that list a series of specific steps that can be



implemented to perform the recited function. Thus, in addition to the specific algorithms recited at column 9, ll. 36-38, the Court finds that the figures with flowcharts (Figures 2A, 2B, 6) should likewise be included as corresponding structure.

The Court construes the term “system control means for receiving signals from said thermosensor and user interface and for processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet” to be a means-plus-function limitation with the following function and structure:

Function: “Receiving signals from said thermosensor and user interface and processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet”

Structure: “standalone controller, single task control logic unit, microprocessor, digital processor control unit, or CPU that performs the algorithms described at col. 9, ll. 36-38 and at Figures 2A, 2B, and 6, and equivalents thereof”

**B. “microprocessor ...”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
Not a means-plus-function claim; plain and ordinary meaning	<p>Means-plus-function limitation</p> <p><u>Function:</u> Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure:</u> This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” Therefore, the claim is indefinite.</p>

The disputed term “microprocessor comprising a central processing unit (CPU) operably connected with an input/output (I/O) inter-face, random access memory (RAM), and read only memory (ROM)” appears in claim 10 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that because the underlying “system control means” element recited in the independent claims is not a means-plus-function limitation, then this element should likewise not be a means-plus-function limitation and should be given its plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 23-24.) Further, the disputed phrase does not contain the term “means” and recites additional structure for the “system control means” that clearly connote structure. (*Id.* at 24.) Such structure clearly rebuts Defendant’s allegations of indefiniteness to the disputed term for alleged failure to recite an algorithm. (*Id.*)

Defendant argues that the term does not rebut the presumption that the “system control means” term recited in the independent claims is presumptively a means-plus-function limitation. (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 11-12.) This

dependent claim does not recite programming, it only recites generic computer components that are not sufficient to perform the claimed function in its entirety. (*Id.* at 12.) For the same reasons as the “system control means” term in independent claim 1, because the specification doesn’t disclose an algorithm for performing all of the recited function in claim 1, then the claim is indefinite. (*Id.* at 12.)

In its Reply, Plaintiff argues that the claim term is not subject to the presumption and is full of structures that are well known terms to persons of skill in the art. (*See, e.g.*, Dkt. No. 59 at 3.)

## **(2) Analysis**

The primary issue as to this term is whether it is a means-plus-function limitation. In particular, the issue appears to be whether this term is a means-plus-function limitation if the previously claimed “system control means ...” term in claim 1 (which this term further modifies) is a means-plus-function limitation.

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also equally understood that a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (*quoting Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Here, the disputed term does not recite the word “means.” Therefore, there is a rebuttable presumption that § 112, ¶ 6 does not apply. Here, Defendant has failed to rebut the presumption

because “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Williamson*, 792 F.3d at 1348. The disputed term does not recite any functional language. Instead, it only recites structural limitations. In particular, the disputed term provides a structure for the “control system” recited in independent claim 1 to be a “microprocessor comprising a central processing unit (CPU) operably connected with an input/output (I/O) inter-face, random access memory (RAM), and read only memory (ROM).” Accordingly, the disputed term – by itself – neither recites function without reciting sufficient structure nor fails to recite sufficiently definite structure. *See, e.g., Williamson*, 792 F.3d at 1349. Thus, it is clear that the disputed term – by itself – is not a means-plus-function limitation.

The Defendant appears to not argue that the disputed phrase itself is a means-plus-function limitation as opposed to the argument that because the previously recited “system control means...” term is a means-plus-function limitation that this separate term is also a means-plus-function. The Court notes that even if the disputed phrase – by itself – is not construed as a means-plus-function limitation, that such a finding does not change the Court’s ruling that the “system control means ...” in independent claim 1 is a means-plus-function limitation, which would then necessarily apply to any dependent claims further defining the “system control means...” The Court’s construction as to this term does not make the dependent claim somehow broader than independent claim 1, as suggested by the Defendant during the claim construction hearing. Instead, a plain and ordinary meaning finding to the disputed phrase in claim 10 simply further limits the corresponding structure of claim 1 and does not remove the application of a means-plus-function limitation to that term in claim 1. Thus, the Court finds that the specific limitation of claim 10 (a “microprocessor comprising...”) further limits the corresponding structures for the “system control means” of claim 1.

The Court construes “microprocessor comprising a central processing unit (CPU) operably connected with an input/output (I/O) inter-face, random access memory (RAM), and read only memory (ROM)” to have its **plain and ordinary meaning**.

**C. “programmable digital processor ...”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
Not a means-plus-function claim; plain and ordinary meaning	<p>Means-plus-function limitation</p> <p><u>Function:</u> Receiving signals from said thermosensor and user interface and . . . processing said signals to generate appropriate control signals to control said fluid supply control valve actuator(s) and said flow control valve actuator means to achieve programmed or user-selected set temperature, flow rate and volume at said system outlet</p> <p><u>Structure:</u> This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” Therefore, the claim is indefinite.</p>

The disputed term “programmable digital processor which implements feedback control of one or more system parameters based on a control algorithm that is selected from a proportional, proportional plus integral, proportional plus integral plus derivative, or feed forward control algorithm” appears in claim 13 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that because the underlying “system control means” element recited in the independent claims is not a means-plus-function limitation, then this element should likewise not be a means-plus-function limitation and should be given its plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 24-25.) Further, the disputed phrase does not contain the term “means” and recites additional structure for the “system control means”

that clearly connote structure. (*Id.*) Such structure clearly rebuts Defendant’s allegations of indefiniteness to the disputed term for alleged failure to recite an algorithm. (*Id.*)

Defendant argues that the term does not rebut the presumption that the “system control means” term recited in the independent claims is presumptively a means-plus-function limitation. (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 13.) The dependent claim provides no meaningful structural limitations on the “system control means” of claim 1. (*Id.*) This dependent claim does not recite programing, it only recites generic computer components that are not sufficient to perform the claimed function in its entirety. (*Id.*) For the same reasons as the “system control means” term in independent claim 1, because the specification doesn’t disclose an algorithm for performing all of the recited function in claim 1, then the claim is indefinite. (*Id.*)

In its Reply, Plaintiff argues that the claim term is not subject to the presumption and is full of structures that are well known terms to persons of skill in the art. (*See, e.g.*, Dkt. No. 59 at 3.) Plaintiff argues that sufficient structure is disclosed by the “processor” that is a “programmable digital processor.” (*Id.* at 3-4.)

## **(2) Analysis**

The primary issue as to this term is whether it is a means-plus-function limitation. In particular, the issue appears to be whether this term is a means-plus-function limitation if the previously claimed “system control means ...” term in claim 1 (which this term further modifies) is a means-plus-function limitation.

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also

equally understood that a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Here, the disputed term does not recite the word “means.” Therefore, there is a rebuttable presumption that § 112, ¶ 6 does not apply. Here, Defendant has failed to rebut the presumption because “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Williamson*, 792 F.3d at 1348. The disputed term does not recite any functional language. Instead, it only recites structural limitations. In particular, the disputed term provides a structure for the “control system” recited in independent claim 1 to be a “programmable digital processor which implements feedback control of one or more system parameters based on a control algorithm that is selected from a proportional, proportional plus integral, proportional plus integral plus derivative, or feed forward control algorithm.” Accordingly, the disputed term – by itself – neither recites function without reciting sufficient structure nor fails to recite sufficient definite structure. *See, e.g., Williamson*, 792 F.3d at 1349. Thus, it is clear that the disputed term – by itself – is not a means-plus-function limitation.

The Defendant appears to not argue that the disputed phrase itself is a means-plus-function limitation as opposed to the argument that because the previously recited “system control means...” term is a means-plus-function limitation that this separate term is also a means-plus-function. The Court notes that even if the disputed phrase – by itself – is not construed as a means-plus-function limitation, that such a finding does not change the Court’s ruling that the “system control means ...” in independent claim 1 is a means-plus-function limitation, which would then

necessarily apply to any dependent claims further defining the “system control means...” The Court’s construction as to this term does not make the dependent claim somehow broader than independent claim 1, as suggested by the Defendant during the claim construction hearing. Instead, a plain and ordinary meaning finding to the disputed phrase in claim 13 simply further limits the corresponding structure of claim 1 and does not remove the application of a means-plus-function limitation to that term in claim 1. Thus, the Court finds that the specific limitations of claim 13 (a “programmable digital processor which implements ...”) further limits the corresponding structures for the “system control means” of claim 1.

The Court construes “programmable digital processor which implements feedback control of one or more system parameters based on a control algorithm that is selected from a proportional, proportional plus integral, proportional plus integral plus derivative, or feed forward control algorithm” to have its **plain and ordinary meaning**.



**D. “remote system monitoring / control device ...”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
<p>Not a means-plus-function claim; plain and ordinary meaning</p>	<p>Means-plus-function limitation</p> <p>Function: (i) Bidirectional data transmission and reception between said remote monitoring/control device and said system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters; (ii) remotely generate signals to remotely select said one or more system functions or parameters; and (iii) receive signals from said system control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters</p> <p>Structure: Personal computer, electronic day planner, or computerized building management system, and structural equivalents thereof</p> <p>This claim element is directed to software and the specification fails to “disclose an algorithm for performing the claimed function.” Therefore, the claim is indefinite.</p>

The disputed term “remote system monitoring/control device operable for bidirectional data transmission and reception between said remote monitoring/control device and said system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters, wherein said remote monitoring/control device operates to remotely generate signals to remotely select said one or more system functions or parameters, and wherein said remote monitoring/control device also operates to receive signals from said system control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters” appears in claim 1 of the ’764 patent.

## **(1) The Parties' Positions**

Plaintiff argues that the term does not recite the term “means,” should not be a means-plus-function limitation, and should be given its plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 12-14.) Plaintiff further argues that no specific algorithm is required because the claim simply requires routine functions such as processing, receiving, and storing, and general computing components are sufficient structure for such routine functions. (*Id.* at 13-14.)

Defendant argues that the term “device” is a verbal construct that does not connote sufficiently definite structure just like the term “means.” (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 14.) Defendant argues that the term “remote system monitoring/control device” provides no structure. (*Id.* at 14-15.) Because the recited functions require more than just a generic computer and the only structure disclosed is a personal computer without any software or algorithm, the term is indefinite. (*Id.*)

In its Reply, Plaintiff argues that the claim term refers to devices that are well known to persons of skill in the art. (*See, e.g.*, Dkt. No. 59 at 4-5.) Plaintiff argues that the simple function of remote monitoring and control is a generic computer function that does not require the disclosure of software or a specific algorithm. (*Id.* at 4-5.)

## **(2) Analysis**

The parties dispute whether the term is a means-plus-function limitation.

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also equally understood that a claim term that does not use “means” will trigger the rebuttable

presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Here, the disputed term does not recite “means,” and thus there is a rebuttable presumption that it is not a means-plus-function limitation.

Although “[g]eneric terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means,’” *Williamson*, 793 F.3d at 1350, the Court finds that this disputed term – despite the use of the word “device” – recites sufficiently definite structure given the context of the limitations in which the claim term is found. *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014) (“Even if a patentee elects to use a ‘generic’ claim term, such as ‘a nonce word or a verbal construct,’ properly construing that term (in view of the specification, prosecution history, etc.) may still provide sufficient structure such that the presumption against means-plus function claiming remains intact.”). Moreover, a modifier added to a nonce term (*e.g.*, module, element, device) can prevent the term from being construed as a means-plus-function element because the modifier “further narrows the scope of those structures covered by the claim and makes the term more definite.” *Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 705 (Fed. Cir. 1998).

Regarding the term “remote system monitoring/control device,” the claims themselves connote sufficiently definite structure by describing how the “remote system monitoring/control device” operates within the claimed invention to achieve its objectives. For instance, claim 1 of the ’764 patent recites that it is “operable for bidirectional data transmission and reception” with

the system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters. Claim 1 also recites that it “operates to remotely generate signals to remotely select said one or more system functions or parameters.” Claim 1 also recites that it “operates to receive signals from said system control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters.” Therefore, the claims themselves connote sufficiently definite structure by describing how the “remote system monitoring/control device” operates within the claimed invention to achieve its objectives. *See, e.g., Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1319-21 (Fed. Cir. 2004) (finding “circuit [for performing a function]” to be sufficiently definite structure in part because the claim recited the “objectives” and “operations” of the circuit); *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1295, 1301 (Fed. Cir. 2014) (finding “heuristic [for performing a function]” to be sufficiently definite structure in part because the patent described the operation and objectives of the heuristic).

In addition, the specification provides numerous details on the remote system monitoring/control device. *See, e.g.*, col. 12, l. 60 – col. 13, l. 28. For example, the specification states that the control device may be similar to a standard IR television remote. *Id.* at col. 13, ll. 3-7. Moreover, the use of the word “remote” in conjunction with the word “device” places an additional functional constraint on a structure otherwise adequately defined. *Personalized Media Communs., L.L.C. v. ITC*, 161 F.3d 696, 705 (Fed. Cir. 1998) (finding that the adjectival qualification “digital” further “narrows the scope of those structures covered by the claim and makes the term more definite.”), *see also Williamson*, 792 F.3d at 1351 (noting that “the presence of modifiers can change the meaning of” an otherwise nonce term).

On balance, the Defendant has not rebutted the presumption that the term is not subject to 35 U.S.C § 112, ¶ 6. Overall, the Court finds that a person of ordinary skill in the art would understand that “the claim language, read in light of the specification, recites sufficiently definite structure to avoid § 112, ¶ 6.” *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014). Thus, the term is a not means-plus-function limitation governed by 35 U.S.C § 112, ¶ 6.

One of ordinary skill in the art, based upon the specification and the claims, would understand the “remote system monitoring/control device” term to have its plain and ordinary meaning. The Court rejects Defendant’s arguments to the contrary. No further clarification of this term is necessary. Because this resolves the dispute between the parties, the Court finds that the term requires no further construction. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

The Court construes “remote system monitoring/control device operable for bidirectional data transmission and reception between said remote monitoring/control device and said system control means and/or system sensor(s) for remotely monitoring and controlling said one or more system functions or parameters, wherein said remote monitoring/control device operates to remotely generate signals to remotely select said one or more system functions or parameters, and wherein said remote monitoring/control device also operates to receive signals from said system

control means and/or said one or more system sensor(s) to remotely monitor said one or more system functions or parameters” to have its **plain and ordinary meaning**.

**E. “fluid supply control valve” and “fluid control valve”**

<b><u>Disputed Term</u></b>	<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
“fluid supply control valve” (claims 1, 26)	Plain and ordinary meaning In the alternative, “valve which regulates flow from a fluid supply”	“Electronically-controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply”
“fluid control valve” (claims 1, 26)	Plain and ordinary meaning In the alternative, “valve which regulates the flow of a mixed fluid”	“Electronically-controlled valve capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow”

The disputed terms “fluid supply control valve” and “fluid control valve” appear in at least claims 1 and 26 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that the terms should be given their plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 3-5.) Plaintiff argues that Defendant’s construction impermissibly incorporates limitations from one example of one embodiment in the specification, but such a statement is not an express disavowal. (*Id.*) Plaintiff argues that the term “fluid supply control valve” has a commonly accepted meaning as evidenced by technical dictionaries. (*Id.* at 3.) Plaintiff also argues that Defendant’s arguments are even weaker for the “fluid control valve” term, as the relied upon language in the specification is not discussing a fluid control valve but instead is directed to supply valves, and dependent claim 3 would be superfluous to Defendant’s construction. (*Id.* at 4-5.)

Defendant argues that its proposed construction is not based solely on one disclosure of the specification but is properly based on the context and disclosures of the specification as a whole. (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 16, 20.) The Defendant argues that the repeated characterizations in the specification regarding the valves are effectively clear disclaimers of claim scope. (*Id.* at 17-18.) Defendant argues that Plaintiff’s construction for the term “fluid supply control valve” is completely divorced from the intrinsic record and uses the undefined term “regulate.” (*Id.* at 19.) Regarding “fluid control valve,” Defendant argues that the specification refers to the capabilities of not only supply valves but other control valves as well. (*Id.* at 20.) Defendant argues that Plaintiff’s superfluous argument regarding claim 3 is wrong and claim differentiation is maintained. (*Id.* at 20-21.)

In its Reply, Plaintiff argues that Defendant is improperly limiting the disputed term based on a single embodiment in the specification. (*See, e.g.*, Dkt. No. 59 at 5-6.) The use of “must” in the context of the specification is not a clear disavowal of claim scope. (*Id.*)

## **(2) Analysis**

The parties dispute whether plain and ordinary meaning applies. Because the issues are the same for the “fluid supply control valve” and the “fluid control valve” terms, the Court groups these terms together in its analysis.

The claim language for the disputed terms is straightforward. The disputed terms are found in both independent claims 1 and 26. For the “fluid supply control valve” in claim 1, the following language is recited: “a fluid supply control valve for regulating flow of a first fluid and a second fluid from corresponding first and second fluid sources into a mixing port.” (emphasis added.) Similarly, for the “fluid control valve” in claim 1, the following language is recited: “a fluid

control valve for regulating flow of a mixed fluid flow at said system outlet.” (emphasis added.)

The terms are used similarly in independent claim 26.

At no point do the claims require the valves to be “electronically controlled,” nor do they require the limitation of “opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply” as proposed by the Defendant. Instead, the claim language simply requires a valve that regulates the fluid flow. This is consistent with the plain meaning of a term “valve,” which is (in general) simply any device for controlling the flow of a liquid, gas, or other material through a passage, pipe, inlet, outlet, etc.

The specification also uses the term “valve” in a manner consistent with its plain and ordinary meaning. Consistent with the claims, the specification mentions that the valves may regulate (i.e., initiate, terminate, or modulate) flow of fluids:

In the embodiment of the invention illustrated in FIG. 1, the hot water source 12 and cold water source 14 are each regulated by a separate supply valve, a hot water supply valve 18, and cold water supply valve 20. Alternately, a single valve can control both hot and cold water flow into the fluid mixing port 16. Commensurate with broader aspects of the invention, these and other control valves can be selected from a variety of **conventional, electronically-controlled valves useful for regulating (i.e., initiating, terminating and modulating) flow of gases and/or fluids**. Thus, for example, the hot and cold water supply valve(s) may be motor-driven or actuated by proportional solenoid, pressure solenoid or other valve actuation means adapted for electronic valve control. The valves must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of hot and cold water supply. In this regard, the valve must be capable of being adjusted by very small increments to provide a sufficient degree of precision for user selection and adjustment of water temperature. Additionally, the valves must be adapted for rapid actuation but must not move too fast or too far upon actuation so as to result in an adjusted valve position that overshoots a target supply setting.

(’764 patent, col. 5, ll. 29-51)(emphasis added). However, the specification also contains language regarding features that the valve allegedly “must” have. (*Id.*) It is these features that the Defendant is proposing in its proposed construction. The Defendant does not cite any extrinsic evidence or



common dictionary definitions in support of its construction, nor does it rely upon any part of the prosecution history for a disavowal. In other words, Defendant's sole argument is a disavowal or disclaimer argument based on the specification, and in particular the portion of the specification referenced above.

The Court is not persuaded by Defendant's arguments. The "fluid supply control valve" and "fluid control valve" are relatively simple and straightforward terms. The Court finds that these terms do not appear to have a meaning other than their plain and ordinary meaning. Had the patentee wanted to limit the terms to include the limitations proposed by Defendant, it could have easily done so. Further, the construction proposed by the Defendant includes numerous limitations that are vague, ambiguous, and potentially indefinite. The Court finds that the examples in the specification are non-limiting embodiments of the invention that should not be imported into the claims. Here, the first sentence of the paragraph relied upon by the Defendant states that the following description (with the "must" language) is merely an "embodiment." '764 patent, col. 5, l. 29. The Court rejects Defendant's arguments that the relied upon language is limited to the claimed invention or is a disavowal for the invention and/or "valve" terms. The Federal Circuit has held that "particular embodiments appearing in the written description will not be used to limit claim language that has broader effect." *Innova/Pure Water*, 381 F.3d at 1117. Even where a patent describes only a single embodiment, absent a "clear intention to limit the claim scope," it is improper to limit the scope of otherwise broad claim language by resorting to a patent's specification. *Id.*; see also *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (citing cases rejecting the contention that the claims of the patent must be construed as being limited to the single embodiment); *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) ("Although the specification may aid the court in interpreting the meaning of

disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.”); *Phillips*, 415 F.3d at 1323.

During the claim construction hearing, Defendant raised, for the first time, a potential antecedent basis issue regarding the “fluid control valve.” Claim 1 (as well as claim 26) recites a “fluid control valve for regulating...” and then subsequently recites a “flow control valve actuator operatively connected to said flow control valve for actuating opening and closure operations thereof.” While there appears to be no dispute between the parties that the previously recited “fluid control valve” is the same as the later recited “flow control valve,” because this issue is not before the Court the Court need not decide the issue.

The Court finds that the terms “fluid supply control valve” and “fluid control valve” have no meaning other than their plain and ordinary meaning. The specification and claim language makes clear that the valves are simply devices used to regulate the flow of fluid, which is the plain meaning of the term “valve.” The Court rejects Defendants’ arguments to the contrary. Because this resolves the dispute between the parties, the Court finds that the term requires no further construction.

The Court construes “fluid supply control valve” to have its **plain and ordinary meaning**.

The Court construes “fluid control valve” to have its **plain and ordinary meaning**.

**F. “fluid supply control valve actuator ...” and “fluid control valve actuator ...”**

<b><u>Disputed Term</u></b>	<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
<p>“flow control valve actuator ... for actuating opening and closure operations thereof”</p> <p>(claims 1, 26)</p>	<p>Not a means-plus-function claim → Plain and ordinary meaning; In the alternative,</p> <p><u>Function</u>: opening or closing a valve</p> <p><u>Structure</u>: control motor, stepper motor, solenoid, electronic valve controller, electric, pneumatic, hydraulic, or magnetic driven motor</p>	<p>Means-plus-function limitation</p> <p><u>Function</u>: Actuating opening and closure operations of a flow control valve, which valve must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of flow, where the actuator moves a valve member in relationship to an associated valve seat to open or close the valve</p> <p><u>Structure</u>: Electric, pneumatic, hydraulic, or magnetically driven motor, or solenoid, and structural equivalents thereof</p>
<p>“fluid supply control valve actuator ... for actuating opening and closure operations thereof”</p> <p>(claims 1, 26)</p>	<p>Not a means-plus-function claim → Plain and ordinary meaning; In the alternative,</p> <p><u>Function</u>: valve actuation</p> <p><u>Structure</u>: control motor, stepper motor, solenoid, electronic valve controller, electric, pneumatic, hydraulic, or magnetic driven motor</p>	<p>Means-plus-function limitation</p> <p><u>Function</u>: Actuating opening and closure operations of a fluid supply control valve, which valve must be capable of opening and closing smoothly, rapidly, and with adequate precision to achieve fine control of fluid supply, where the actuator moves a valve member in relationship to an associated valve seat to open or close the valve</p> <p><u>Structure</u>: Electric, pneumatic, hydraulic, or magnetically driven motor, or solenoid, and structural equivalents thereof</p>

The disputed terms “fluid supply control valve actuator ...” and “fluid control valve actuator ...” appear in at least claims 1 and 26 of the ’764 patent.

### **(1) The Parties' Positions**

Plaintiff argues that the terms do not recite the term “means,” should not be means-plus-function limitations, and should be given their plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 9-11.) The terms provide more than sufficient description for one of ordinary skill to understand the claimed structure. (*Id.*) For example, an “actuator” is a well-defined term and provides a class of structures to a person of ordinary skill, and the rest of the claim describes how the actuator interacts with the other components. (*Id.*) Plaintiff argues that Defendant’s construction seeks to improperly limit the term in the same way that it attempted on the separate “fluid control valve” and “fluid supply control valve,” and such a limitation has no place for a recited function of the actuator. (*Id.*)

Defendant argues that the term “actuator” is nothing more than a verbal construct that does not connote sufficient definite structure, and is thus tantamount to using the word “means.” (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 24-26.) The ‘764 patent uses the phrase “actuator means” at multiple points in the specification, confirming that it is a means-plus-function limitation. (*Id.* at 24.) Defendant argues that the Plaintiff’s recited function is wrong because it is not tied to the claim language and improperly rewires the claim term, and argues that its own insertion of specific structural limitations is not altering the claimed function must just describing what the actuator must do. (*Id.* at 25.) Defendant argues that the Plaintiff’s corresponding structure is wrong because while Defendant’s proposed constructions are all specific examples of “control motors” (e.g., the species of control motors), while Plaintiff’s proposed construction is the generally the genus of control motors. (*Id.* at 24.)

In its Reply, Plaintiff argues that the term “actuator” is not a nonce word. (*See, e.g.*, Dkt. No. 59 at 8.) Plaintiff argues that an “actuator” connotes structure to a person of ordinary skill in

the art. (*Id.*) The fact that the claim also mentions “actuating” does not transform the well known “actuator” term into a means-plus-function limitation. (*Id.*)

## **(2) Analysis**

The primary issue as to these terms is whether they are means-plus-function limitations. Because of the similarity of issues, the separate but related terms of “flow control valve actuator ...” and “fluid supply control valve actuator ...” are grouped and analyzed together.

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also equally understood that a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Here, the disputed term does not recite the word “means.” Therefore, there is a rebuttable presumption that § 112, ¶ 6 does not apply. While the Defendant argues that the use of the term “actuator” is a nonce term, the Court disagrees. The term “actuator” is not a nonce term, such as the generic terms “mechanism,” “element,” “device,” and similar nonce words. Thus, there is a presumption that this term is not a means-plus-function limitation. And as detailed below, Defendant has failed to rebut the presumption because “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Williamson*, 792 F.3d at 1348. Overall, the Court finds that the disputed “actuator” terms provide

sufficiently definite structure given the context of the limitations in which the claim terms are found.

As provided by the Plaintiff, “actuator” is a well known word and is defined in the Dictionary of Mechanical Engineering as “[a]n electric, hydraulic, mechanical or pneumatic device, or combination of these to effect some predetermined linear or rotating movement.” The fact that a technical dictionary, which is evidence of the understandings of persons of skill in the art, provides a meaning to the “actuator” term plainly indicates that the term “actuator” connotes structure. *See Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) (finding structure for the term “circuit” based at least in part on “circuit” being defined in a technical dictionary). Far from being a placeholder, “actuator” defines a class of structures to a person of ordinary skill. “[I]t is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.” *TecSec*, 731 F.3d at 1347 (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359-60 (Fed. Cir. 2004)).

Consistent with this understanding, the specification provides an example of the actuator means as being any electric, pneumatic, hydraulic, or magnetically driven motor, or solenoid, as well as a stepper motor. *See, e.g.*, ’764 patent, col. 5, ll. 34-66; col. 8, ll. 14-21; col. 16, ll. 10-12. Further, the claim terms provide meaningful context and describe how the “actuator” interacts with other components. For example, the “flow control valve actuator” is “operatively connected to said flow control valve for actuating opening and closure operations thereof.” Similarly, the “fluid supply control actuator” is “operatively connected to said fluid supply valve for actuating opening and closure operations thereof.” The Court finds that the Defendant has not rebutted the presumption that the term is not a means-plus-function limitation. On balance, the Plaintiff has

persuasively demonstrated that the disputed term refers to a particular class of structures and/or that the disputed term’s use of the word “actuator” (along with other limitations) is structural rather than functional. Thus, the term is a not means-plus-function limitation governed by 35 U.S.C § 112, ¶ 6.

One of ordinary skill in the art, based upon the specification and the claims, would understand the disputed terms to have their plain and ordinary meaning. The Court rejects Defendants’ arguments to the contrary. No further clarification of the terms is necessary. Because this resolves the dispute between the parties, the Court finds that the term requires no further construction.

The Court construes “flow control valve actuator ... for actuating opening and closure operations thereof” to have its **plain and ordinary meaning**.

The Court construes “fluid supply control valve actuator ... for actuating opening and closure operations thereof” to have its **plain and ordinary meaning**.

**G. “external data storage and input means ...”**

<u><b>Plaintiff’s Proposed Construction</b></u>	<u><b>Defendant’s Proposed Construction</b></u>
<p>Not a means-plus-function claim → Plain and ordinary meaning; In the alternative,</p> <p><u>Function</u>: storing and transferring data</p> <p><u>Agreed Structure</u>: personal computer; electronic day planner; computerized building management system; external data processing device; personal data storage template; hard disk; floppy disk; zip or jaz drive; cd-ROM; magnetic or optical data storage devices</p>	<p>Means-plus-function limitation</p> <p><u>Function</u>: storing and transferring data to said system control means to control one or more system function(s) or parameter(s)</p> <p><u>Agreed Structure</u>: personal computer; electronic day planner; computerized building management system; external data processing device; personal data storage template; hard disk; floppy disk; zip or jaz drive; cd-ROM; magnetic or optical data storage devices</p>

The disputed term “external data storage and input means for storing and transferring data to said system control means to control one or more system function(s) or parameter(s)” appears in claim 26 of the ’764 patent.

### **(1) The Parties’ Positions**

Plaintiff argues that the phrase relates to basic computing functions of data storage and transfer and thus the general structure disclosed in the claim and specification is sufficient to connote structure and rebut any means-plus-function limitation application, and thus the term should be given its plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 15-16.) Plaintiff agrees with the Defendant’s corresponding structure to the extent it is a means-plus-function limitation. (*Id.*)

Defendant argues that the term is presumptively a means-plus-function limitation because of the included word “means.” (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 28-29.) Defendant argues that while a general purpose computer can perform generic functions like processing, receiving, storing, etc. to avoid the need of a separate algorithm, the claim language here requires more than merely plugging in a general purpose computer and requires special programming. (*Id.* at 28.)

In its Reply, Plaintiff argues that special programming is not needed and because only generic computer functions are necessary (such as storing and transferring data), the claim term is not a means-plus-function limitation. (*See, e.g.*, Dkt. No. 59 at 10.)

### **(2) Analysis**

The parties have two disputes. First, the parties disagree as to whether the term is a means-plus-function limitation. Second, if the term is a means-plus-function limitation, the parties agree to the corresponding structure but dispute the recited function.



Here, the disputed term clearly recites “means,” and thus there is a presumption that it is a means-plus-function limitation.

The Court finds that the phrase “external data storage and input” does not have a well-understood structural meaning. The term “input” is generic and does not recite any distinct structure, and the term does not modify the word “means” with any language that imparts structure. Similarly, the phrase “external data storage” does not recite any distinct structure to rebut the presumption afforded by the use of the term “means.” Further, the remaining language cited in the disputed term is primarily functional and does not describe sufficient structure to avoid a finding that the term is a means-plus-function limitation. In particular, the disputed term does not contain a “recitation of ... operation in sufficient detail to suggest structure to persons of ordinary skill in the art.” *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320–21 (Fed. Cir. 2004). The Court finds that the Plaintiff has not rebutted the presumption that the term is a means-plus-function limitation. On balance, the Plaintiff has not persuasively demonstrated that the disputed term refers to a particular class of structures or that the disputed term’s use of the word “external data storage and input” is structural rather than functional. Thus, the term is a means-plus-function limitation governed by 35 U.S.C § 112, ¶ 6.

To the extent the term is a means-plus-function limitation, the parties agree to the corresponding structure and only dispute the recited function.

As for the recited function, the Court finds that the disputed term requires more than just “storing and transferring data” as suggested by the Plaintiff. The Court finds that Defendant’s proposed function, which is consistent with the claim language, is appropriate.

The Court construes the term “external data storage and input means for storing and transferring data to said system control means to control one or more system function(s) or parameter(s)” to be a means-plus-function limitation with the following function and structure:

Function: “storing and transferring data to said system control means to control one or more system function(s) or parameter(s)”

Structure: “personal computer; electronic day planner; computerized building management system; external data processing device; personal data storage template; hard disk; floppy disk; zip or jaz drive; cd-ROM; magnetic or optical data storage devices”

**H. “memory means ...”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
<p>Not a means-plus-function claim → Plain and ordinary meaning; In the alternative,</p> <p><u>Function</u>: entry and storage of data</p> <p><u>Agreed Structure</u>: computer memory</p>	<p>Means-plus-function limitation</p> <p><u>Function</u>: Entry and storage of user-defined temperature settings in a nonvolatile memory device</p> <p><u>Structure</u>: This claim term fails to recite sufficiently definite structure and the ‘764 patent fails to disclose any structure corresponding to the “memory means.” Therefore, the claim is indefinite.</p>

The disputed term “memory means for entry and storage of user-defined temperature settings” appears in at least claim 6 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that the phrase relates to basic computing functions and thus the general structure disclosed in the claim and specification are sufficient to connote structure and rebut any means-plus-function limitation application, and thus the term should be given its plain and

ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 18-19.) Plaintiff argues that the Federal Circuit has previously found the phrase “memory means” and “system memory means” to not be a means-plus-function limitation because the term “memory” has a reasonably well understood meaning to provide sufficient structure for accomplishing the recited function. (*Id.*) For the disputed term, Plaintiff argues that it is not used to perform an elaborate or peculiar function; it only requires the entry and storage of a simple type of data – temperature settings. (*Id.*) Thus, any presumption of a means-plus-function limitation is rebutted. (*Id.*) To the extent it is a means-plus-function limitation, Plaintiff argues that the phrase “non-volatile memory” should not be included because it does not appear in the claim and the word connotes structure and not function. (*Id.* at 19.) Plaintiff also argues that nonvolatile memory provides sufficient structure of the recited function and Defendant cannot show by clear and convincing evidence that the term is indefinite. (*Id.*)

Defendant argues that the term is presumptively a means-plus-function limitation because of the included word “means.” (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 26-27.) Defendant argues that the phrase “non-volatile” memory is required because the memory must retain the information even if the power is turned off. (*Id.* at 27.) Defendant argues that if there is corresponding structure, then the structure must be non-volatile computer memory. (*Id.*)

In its Reply, Plaintiff argues that it has offered evidence and case law to rebut the presumption of a means-plus-function limitation. (*See, e.g.*, Dkt. No. 59 at 8-9.) Plaintiff argues that if the term is a means-plus-function limitation, the corresponding structure is computer memory in general and not limited solely to nonvolatile memory. (*Id.*)

## **(2) Analysis**

The parties have two disputes. First, the parties disagree as to whether the term is a means-plus-function limitation. Second, if the term is a means-plus-function limitation, the parties dispute the corresponding structure and recited function.

Here, the disputed term clearly recites “means,” and thus there is a presumption that it is a means-plus-function limitation.

However, despite the presumption, the Court finds that the term “memory” has a reasonably well-understood structural meaning and is sufficient structure for accomplishing the recited function of entering and storing user defined temperature settings. This is consistent with Federal Circuit caselaw on similar terms, such as “system memory means” and even “memory means.” *See, e.g., TecSec, Inc. v. IBM Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013) (finding the term “system memory means” not to be a means-plus-function limitation because in part because the term “system memory” has sufficient structure); *see also Optimal Recreation Solutions. LLP v. Leading Edge Techs., Inc.*, 6 F. App’x 873 (Fed. Cir. 2001) (finding the term “memory means for storing the position of the golf cup” not to be a means-plus-function limitation because in part because the term “memory” has sufficient structure for accomplishing the recited function). “[I]t is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.” *TecSec*, 731 F.3d at 1347 (*citing Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359-60 (Fed. Cir. 2004)). The fact that the simple term “memory” may cover a broad class of structures does not mean that it does not have structure. To those of skill in the art, memory is a specific structure that stores data. Consistent with this understanding, the specification provides an example of the memory as being non-volatile memory

that stores user-defined temperature settings. *See, e.g.*, '764 patent, col. 7, ll. 19-20. Similarly, the relevant claim language in dependent claim 6 provides more than mere functional language, and specifies that the “thermosensor” itself incorporates the “memory means.” On balance, particularly in view of Federal Circuit law on the term “memory means...,” the Court finds that the Plaintiff has rebutted the presumption that the term is a means-plus-function limitation. On balance, the Plaintiff has persuasively demonstrated that the disputed term refers to a particular class of structures and/or that the disputed term’s use of the word “memory” is structural rather than functional. Thus, the term is a not means-plus-function limitation governed by 35 U.S.C § 112, ¶ 6.

Further, the Court finds that the term is not necessarily limited to a non-volatile memory as argued by Defendant. Claim 6 specifies that the “thermosensor” of claim 1 has the claimed “memory means,” and the Court is not convinced that the thermosensor must have a non-volatile memory to operate as opposed to volatile memory. In other words, the Court finds that the non-volatile reference in the specification is a non-limiting embodiment of the invention that should not be imported into the claims. The Federal Circuit has held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117.

One of ordinary skill in the art, based upon the specification and the claims, would understand the term “memory” to have its plain and ordinary meaning. The Court rejects Defendants’ arguments to the contrary. Thus, no further clarification of this term is necessary. Because this resolves the dispute between the parties, the Court finds that the term requires no further construction.

The Court hereby construes “memory means for entry and storage of user-defined temperature settings” to have its **plain and ordinary meaning**.

**I. “domestic water supply system”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
Not a means-plus-function claim; plain and ordinary meaning	Means-plus-function limitation  <u>Function:</u> ____  <u>Structure:</u> Fig. 1, Fig. 3, Fig. 4, and equivalents thereof  This claim term fails to recite sufficiently definite structure and thus 34 U.S.C. 112(f) applies.

The disputed term “domestic water supply system” appears in claim 24 of the ‘764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that the term does not recite the term “means,” should not be a means-plus-function limitation, and should be given its plain and ordinary meaning. (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 26-27.) The term provides more than sufficient description for one of ordinary skill to understand the claimed structure, as the phrase “domestic water supply system” would be obvious to a person of skill in the art. (*Id.*) For example, the specification (see FIG. 1 and related description) provides a schematic of domestic shower supply system 10. (*Id.* at 27.)

Defendant argues that it is unclear what claim 24 adds to claim 1, but at the least it has no plain and ordinary meaning. (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 27.) Defendant argues that it is either a means-plus-function limitation (but fails to

provide a recited function) or that the claim term is indefinite because it is not clear to one of ordinary skill in the art. (*Id.*) Defendant then argues that, based on the specification, it appears to be referring to a single house. (*Id.*)

In its Reply, Plaintiff argues that other claims are directed to “commercial” systems, and it is clear that this term is not a means-plus-function limitation. (*See, e.g.,* Dkt. No. 59 at 9.)

## **(2) Analysis**

The issue as to this term is whether it has plain and ordinary meaning or whether it is a means-plus-function limitation. Here, the disputed term does not recite the word “means.” Therefore, there is a rebuttable presumption that § 112, ¶ 6 does not apply.

Defendant has failed to rebut the presumption because “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Williamson*, 792 F.3d at 1348. The disputed term does not recite any functional language; instead, it only recites structural limitations. In particular, the disputed term provides a structure for the “fluid delivery system” recited in independent claim 1 to be a “domestic water supply system.” Nor does the Defendant even attempt to provide a function. Accordingly, the disputed term neither recites function without reciting sufficient structure nor fails to recite sufficient definite structure. *See, e.g., Williamson*, 792 F.3d at 1349. Thus, it is clear that the disputed term is not a means-plus-function limitation. Defendant does not substantively argue that the term is a means-plus-function limitation; instead, Defendant’s argument seems to be that because the term is “unclear,” it must somehow be a means-plus-function limitation. That is not a proper application of § 112, ¶ 6, and the Court rejects Defendant’s arguments on this term.

The Court finds that the “domestic water supply system” term is simple and readily understood. As confirmed by the intrinsic evidence, this term has no special meaning other than its plain meaning. For example, claim 23 specifies that the fluid delivery system of claim 1 is a “domestic water supply system.” The specification provides an example of a “domestic plumbing system” in Figure 1. *See, e.g.*, ’764 patent, col. 5, ll. 17-20. Also, the specification states that the invention is related towards “residential and commercial supply systems.” *Id.* at col. 1, ll. 5-9. The plain meaning of “domestic” implies some type of residential or household use, in contrast to a commercial or other setting. In contrast, claim 24 specifies that the fluid delivery system of claim 1 is a “central heating and cooling system,” and claim 22 specifies that it is a “commercial hospitality” system.

One of ordinary skill in the art, based upon the specification and the claims, would understand the term “domestic water supply system” to have its plain and ordinary meaning. The Court rejects Defendants’ arguments to the contrary. However, the Court finds that a construction for this term may be helpful for the parties and the jury. As supported in the intrinsic record and the plain meaning of the term, “domestic” water supply system is directed towards a water supply system for a home or residence. No further clarification is necessary for this term.

The Court construes “domestic water supply system” to mean “**water supply system for a residence.**”



**J. “user interface input”**

<b><u>Plaintiff’s Proposed Construction</u></b>	<b><u>Defendant’s Proposed Construction</u></b>
<p>Plain and ordinary meaning</p> <p>In the alternative, “input to the user interface”</p>	<p>See definition of: “user input means for ...”</p> <p>See AGREED definition of: “User input means for . . .”</p> <p>Alternatively, claim 7 is invalid as indefinite for lack of antecedent basis because there is no “user interface input” recited in independent Claim 1.</p>

The disputed term “user interface input” appears in at least claim 7 of the ’764 patent.

**(1) The Parties’ Positions**

Plaintiff argues that the term should be given its plain and ordinary meaning or in the alternative simply mean “input to the user interface.” (*See, e.g.*, Plaintiff’s Opening Claim Construction Brief, Dkt. No. 55 at 7.) Plaintiff argues that Defendant’s construction confuses the term with a means-plus-function limitation, which is confusing. (*Id.*) Plaintiff argues that the meaning is so plain that any construction would be confusing. (*Id.*)

Defendant argues that the term “user interface input” must be construed to mean “user input means for ...,” otherwise the term is invalid for lack of antecedent basis because there is no user interface input recited in independent claim 1. (*See, e.g.*, Defendant’s Responsive Claim Construction Brief, Dkt. No. 57 at 21.) Defendant argues that Plaintiff’s construction provides no meaningful argument to the contrary and leaves it unclear whether “user interface input” refers to the “user input means” of claim 1 or some other input. (*Id.* at 21-22.)

In its Reply, Plaintiff argues that while the term is related to the “user input means” in claim 1, they should not receive the same construction. (*See, e.g.*, Dkt. No. 59 at 7.) Plaintiff

argues that because of the specific structure recited, dependent claim 7 does not invoke the application of a means-plus-function limitation. (*Id.*)

## **(2) Analysis**

The dispute here is whether this term has its plain and ordinary meaning or whether it is the same or related somehow to the agreed upon means-plus-function limitation of “input means” in claim 1. In particular, the parties dispute how to construe the term based on the lack of antecedent basis of this term in independent claim 1.

Claim 7 specifies that the “user interface input” of claim 1 is a “remote user input selected from a keypad, touchpad, joystick, roller, pen selector, voice input, or optical input integrated within the remote system monitoring/ control device.” However, claim 1 does not expressly use the words “user interface input.” Instead, claim 1 requires a “user interface including user input means ...” For the “input means” term in claim 1, the parties have agreed that it is a means-plus-function limitation and have agreed to a recited function and corresponding structure. In particular, the parties agree that the corresponding structures for the “user input means” are selected from the following: “external data processing device; keypad; user display; touchpad; joystick; roller; pen selector; voice input; optical input; image input coupled with optical recognition; menu-based input template; menu of selectable functions and parameters; control panel.” *See, e.g.*, Dkt. No. 61 (Joint Claim Construction Chart).

The Court finds that there is no dispute that this phrase is referring to the “user interface including user input means ...” of claim 1. The parties do not genuinely dispute this fact, but disagree as to the best way to construe this term. The Court rejects both parties’ constructions. Defendant generically refers back to the agreed definition for the “user input means...” It is

unclear to what portion of the means-plus-function limitation it is referring to, and to what effect. On the other hand, Plaintiff proposes to construe the term as “input to the user interface.” It is unclear if Plaintiff is arguing that the previously recited “user input means” term in claim 1 is not a means-plus-function limitation or if the “user interface input” is referring to the previously recited “user input means” at all. Both constructions are not helpful.

On balance, the Court finds that a construction is helpful as to this term to clarify the apparent antecedent issue. As stated above, the Court finds that there is no dispute that this phrase is referring to the “user interface including user input means ...” of claim 1. The Court finds that the structures recited in claim 7 are merely limitations to the structures corresponding to the recited function for the “user input means.” Thus, the Court finds that the most appropriate construction of this term is simply “the user input means for the user interface input.”

The Court notes that a construction for this term does not change the parties’ agreed upon meaning (or recited function and corresponding structures) that the “user input means ...” in independent claim 1 is a means-plus-function limitation. In particular, the Court’s construction as to this phrase in dependent claim 7 does not remove the application of a means-plus-function limitation to that term in claim 1. Further, the structures described in claim 7 are narrower than the agreed upon corresponding structures for the “user input means” term in claim 1, and thus there is no conflict in limiting the structures of the user input means in claim 1 to the structures disclosed in claim 7.

The Court hereby construes “user interface input” of claim 7 to mean “**the user input means for the user interface.**”

## V. CONCLUSION

The Court adopts the above constructions set forth in this opinion for the disputed terms of the patent-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

**SIGNED this 5th day of June, 2017.**

  
ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE