

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

SHARKNINJA OPERATING LLC and
SHARKNINJA SALES COMPANY,

*Plaintiffs and
Counterclaim-Defendants*

and

OMACHRON ALPHA INC. and
OMACHRON INTELLECTUAL
PROPERTY INC.

Plaintiffs

v.

DYSON, INC. AND DYSON TECHNOLOGY
LIMITED,

*Defendants and
Counterclaim-Plaintiffs.*

C.A. No. 1:23-cv-12372-ADB

JURY TRIAL DEMANDED

PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF

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D	U.S. Patent No. 10,327,607 (the “’607 Patent”)
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M	<i>Dyson Gen5 Outsize User Manual</i> , https://www.dyson.com/content/dam/dyson/leap-petite-global/markets/australia/floor-care/5097.17_FC_23_ANZ_User_Guides_N418C_Gen5Outsize.pdf
N	<i>Dyson Omni-Glide User Manual</i> , https://www.dyson.com/content/dam/dyson/maintenance/user-guides/en_anz/vacuums/dyson-omniglide-user-manual-2022-ANZ-V2.pdf

I. INTRODUCTION

The Asserted Patents reflect novel and innovative advancements SharkNinja and Omachron have made in vacuum technology. These innovations are claimed in straightforward, easy-to-understand language readily accessible to laypersons. As a result, no claim construction is necessary. Dyson, however, seeks to replace the clarity and simplicity of the plain claim language with ambiguity and complication untethered to the claims and specifications.

Dyson first bundles together twenty-three “orientation” terms from across the eight Asserted Patents. Dyson does not argue that these commonly used terms, such as “front” and “rear,” need construction (they do not). Instead, Dyson claims that these terms are so nebulous that a person of ordinary skill could not reasonably understand what they mean. To the contrary, it is difficult to imagine terms more widely used and readily understood by skilled artisans and laypersons alike. These terms are not indefinite, nor do they require construction.

Dyson next seeks to construe the term “axis,” which appears across several patents, following its well-known meaning taught in elementary school. But Dyson argues that this Court should either construe this term contrary to the plain meaning to inject an artificial limitation incompatible with the intrinsic record, or alternatively that the Court should find this term indefinite. There is a third option—simply apply the plain meaning of this term that is evident from the claims and specification.

Dyson’s proposals for the remaining terms are equally flawed. For the terms “hand grip portion” and “extendable,” Dyson injects arbitrary limitations not found in the intrinsic record. Dyson also plucks the term “parallel” from the claims’ context and offers a single construction for this term. But the claims actually recite two *different* phrases that have distinct meanings—“in parallel” (occurring at the same time) and “parallel to” (extending in the same direction).

Finally, Dyson argues that the preambles of the '607 Patent independent claims should not be construed as limiting. But under Federal Circuit law, the preambles must be construed as limiting, both because they provide antecedent bases for terms in the body of the claims and also recite critical structure.

There is no basis to deviate from the rule that words of a claim “are generally given their ordinary and customary meaning.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Where, as here, the claims are clear, the Court is “not obligated to provide additional guidance to the jury” beyond directing the jury to apply the “ordinary meaning.” *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1206-07 (Fed. Cir. 2010). Dyson’s proposals are contrary to the context of the claims, contrary to the teachings of the specifications, and contrary to Federal Circuit law. SharkNinja respectfully requests the Court reject Dyson’s proposals and find that the disputed terms have their plain and ordinary meaning.

II. LEGAL STANDARDS

General claim construction principles. Claim construction is a question of law. *Teva Pharma. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325 (2015). Claim construction is the first stage of a patent infringement analysis and requires the Court to determine “the scope and meaning of the patent claims asserted.” *Clearstream Wastewater Sys., Inc. v. Hydro-Action, Inc.*, 206 F.3d 1440, 1444 (Fed. Cir. 2000). Also, claim construction is to be resolved with an eye toward the fact that the Court’s adopted construction “becomes the basis of the jury instructions, should the case go to trial.” *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001).

Courts must construe each disputed claim term based on its ordinary and customary meaning to a person of ordinary skill in the art in light of the intrinsic evidence. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Certain terms “may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application

of the widely accepted meaning of commonly understood words” and the plain and ordinary language is sufficient for the trier of fact. *Id.* at 1314. In such cases, the court need not provide further definition for submission of the infringement issue to a jury. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1206-07 (Fed. Cir. 2010); *see also Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (finding that meaning of a term did not “require[] ‘construction,’ or . . . depart[ure] from its ordinary meaning”); *Lisle Corp. v. A.J. Mfg. Co.*, 398 F.3d 1306, 1313 (Fed. Cir. 2005) (“retainer” should be given its ordinary and customary meaning, where nothing in patent specification supported narrowing definition of term); *W.E. Hall Co., Inc. v. Atlanta Corrugating, LLC*, 370 F.3d 1343, 1350 (Fed. Cir. 2004) (concluding that claim term “single piece” “is sufficiently clear to make even resort to the dictionary unnecessary”); *Perfect Curve, Inc. v. Hat World, Inc.*, No. 12-cv-11050-FDS, 2013 WL 4807932, *11 (D. Mass. Sept. 6, 2013) (holding “normally clamp” “is so clear in context that the Court does not believe there is any potential for it to confuse the jury if not construed” beyond finding that the “ordinary meaning” applies); *Halo Elecs., Inc. v. Pulse Eng’g, Inc.*, 721 F.Supp.2d 989, 1006 (D. Nev. 2010) (“end wall” should have its ordinary meaning, no further construction is required).

There is a “heavy presumption” that a claim term carries its “ordinary and customary meaning.” *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1371 (Fed. Cir. 2007). The only two exceptions to this general rule are “(1) when a patentee sets out a definition and acts as his own lexicographer, or (2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

The claim language itself provides substantial guidance as to the meaning of the terms, but claims must be read in light of the specification. *See Phillips*, 415 F.3d at 1315 (“[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” (quoting *Vitronics*, 90 F.3d at 1582)). The prosecution history may also provide guidance as to how the PTO and inventor understood the scope of the patent. *See Phillips*, 415 F.3d at 1317.

Claim construction “typically begins and ends with the intrinsic evidence.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1218 (Fed. Cir. 2014). Courts may also consider extrinsic evidence, such as dictionaries and expert testimony, to determine the meaning of terms. *Id.* Such evidence, however, must not “contradict any definition found in or ascertained by a reading of the patent documents.” *Id.* at 1324 (citing *Vitronics*, 90 F.3d at 1584 n.6).

Indefiniteness. A patent is indefinite if “its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). “Indefiniteness is a matter of claim construction, and the same principles that generally govern claim construction are applicable to determining whether allegedly indefinite claim language is subject to construction.” *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008). “[A]n accused infringer [must] show[] by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.” *Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1249–50 (Fed. Cir. 2008).

III. BACKGROUND

SharkNinja asserts United States Patent Nos. 8,607,407 (the “’407 Patent”), 9,301,666 (the “’666 Patent”), 10,080,472 (the “’472 Patent”), 10,117,550 (the “’550 Patent”), 10,327,607 (the

“’607 Patent”), 10,478,030 (the “’030 Patent”), 10,568,477 (the “’477 Patent”), and 11,389,038 (the “’038 Patent”) (collectively, the “Asserted Patents”), which are generally directed to novel and innovative vacuum technology. For example, the ’550 Patent discloses and claims a two-stage cyclonic vacuum where the cyclone stages are in an inline arrangement with the suction motor, providing higher efficiency. ’550 Patent at, *e.g.*, 22:55–67, Fig. 127, cl. 1. As another example, the ’407 Patent describes and claims an openable door at the front of the vacuum cleaner, an arrangement that allows the vacuum to be emptied without mess. ’407 Patent at 1:50–62, cl. 23.

While the eight Asserted Patents claim different innovative features, they all generally relate to hand vacuum cleaners—technology well known to everyday consumers. Indeed, the disputed terms at issue do not require any special technical knowledge; as discussed below, their meanings are readily understandable by laypersons and require no construction by the Court.

IV. TERMS FOR CONSTRUCTION

- A. **“front,” “forward”/“forwardly,” “rear,” “rearward”/“rearwardly,” “top,” “upper,” “above,” “bottom,” “below,” “sidewall,” “upwardly,” “away,” “downwardly,” “horizontal”/“horizontally”/“when the hand vacuum cleaner is positioned on a horizontal surface”/“when the hand vacuum cleaner is carried by the handle, the suction motor axis extends generally horizontally,” “longitudinally”/“longitudinal,” “vertically,” “laterally” (’607: 1-13; ’030: 1-3, 5-10, 12-13; ’038: 1, 10, 12-15; ’666: 1-4, 6-12; ’407: 23-24; ’477: 2, 12; ’550: 1, 4, 6-14, 17-24, 28; ’472: 1, 9-10, 13-14, 17, 22, 25)**

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
No construction necessary. Not indefinite.	Indefinite.

Dyson lumps together twenty-three different “orientation” terms across the eight Asserted Patents (*e.g.*, “front,” “rear,” “top,”¹ and “bottom”) and argues that they are all indefinite. Dyson cannot meet its burden to show—by clear and convincing evidence—that each of these terms fails

¹ While Dyson identifies the term “top,” this term does not appear in any of the Asserted Claims.

to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus*, 572 U.S. at 910. To the contrary, these commonly used orientation terms are clear and easy to understand, not only by a skilled artisan, but also by a lay person. *See* Ex. K, Declaration of Glenn Akhavein (“Akhavein Decl.”) ¶¶ 38-105.

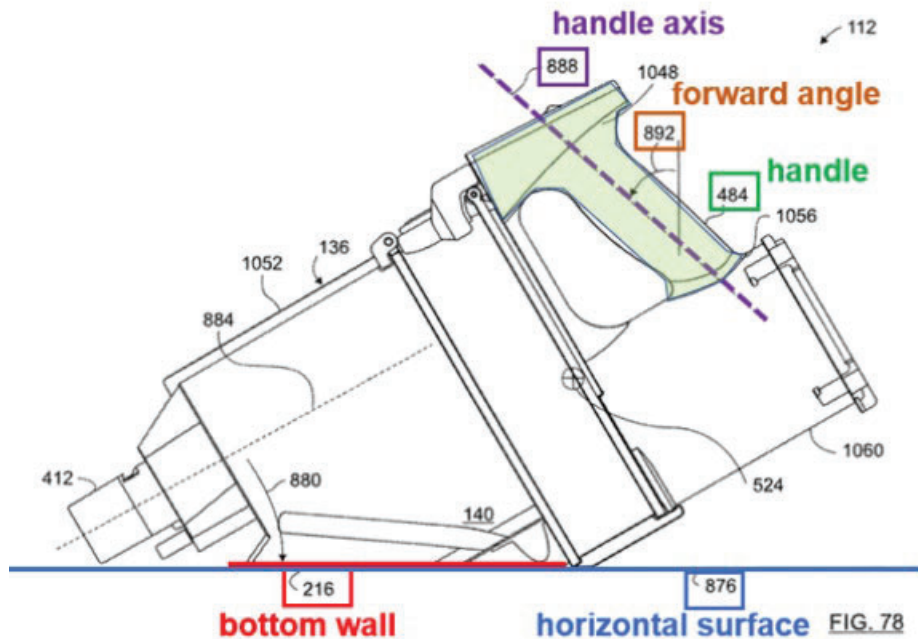
While its indefiniteness argument is not yet fully articulated, Dyson contends that “the claims do not define the terms ‘front’ and ‘rear’ [and other orientation terms] with respect to any reference point, and the Accused Products are normally used in multiple orientations.” Ex. I (Dyson’s Noninfringement Contentions, App’x A) at 3. That the claimed hand vacuums may be used in “multiple orientations” has no bearing on whether the claims are definite—*e.g.*, a skilled artisan (and, indeed, a layperson) would understand that the “bottom” of the vacuum remains the bottom even if it is turned upside down. Akhavein Decl. ¶ 61. Moreover, while these terms are clear on their face, Dyson also ignores the context provided by the claims and specification, which make clear what these terms mean. *Ultimax Cement Manufacturing Corp. v. CTS Cement Manufacturing Corp.*, 587 F.3d 1339, 1347 (Fed. Cir. 2009) (a term’s meaning must be understood in “the context in which the term was used within the claim and the specification”).

The ’550 Patent is representative of the straightforward usage of these well-understood terms.² Claim 1 recites “a hand vacuum cleaner body” that comprises (among other things) “a **bottom**”³ and “a handle,” the handle “having a hand grip portion that extends **upwardly** and **forwardly** when the hand vacuum cleaner body is positioned with the **bottom** on a **horizontal** surface.” ’550 Patent, cl. 1. Such a configuration is depicted in Figure 78, annotated below, where

² Dyson has not articulated any indefiniteness argument specific to any of the identified terms and instead treats them collectively. Thus, each of the “orientation” terms should be found not indefinite for the reasons set forth in this Section.

³ All emphases added unless otherwise specified.

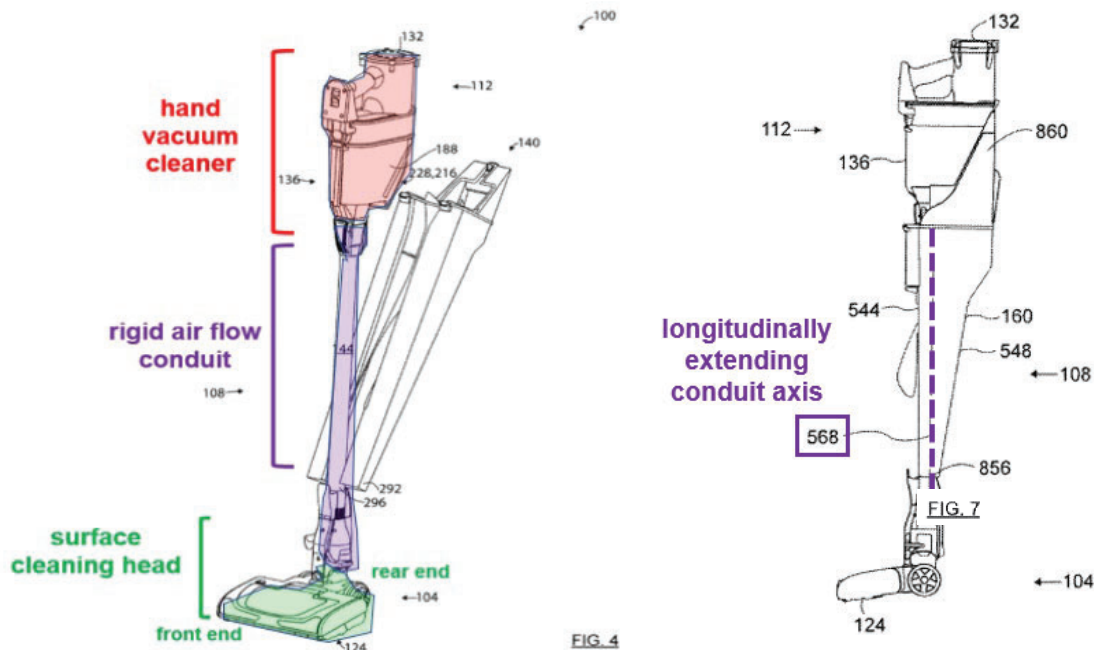
a “handvac 112” has a “**bottom wall 216**” shown “resting on a **horizontal surface 876**,” along with a “**handle 484**.” *Id.* at 31:58–32:62. The specification explains that “**handle axis 888** of **handle 484** extends at a (non-zero) **forward angle 892** to the vertical (e.g., [] when **bottom wall 216** is **horizontal**).” *Id.* at 32:54–56.



These terms are used in their everyday, common-sense way and are not difficult to understand. When the “bottom” of the hand vacuum cleaner body is positioned on a “horizontal surface,” the handle extends “upwardly” (away from the bottom of hand vacuum cleaner body) and “forwardly” (towards the front of hand vacuum cleaner body). Akhavein Decl. ¶ 46.

Claim 1 of the ’550 Patent also recites additional “orientation” terms according to their well-understood meanings. In addition to the “hand vacuum cleaner” discussed above, claim 1 recites “a surface cleaning head having a **front** end [and] a **rear** end,” and “a rigid air flow conduit” that extends between the surface cleaning head and the hand vacuum cleaner, the rigid air flow conduit having a “**longitudinally** extending conduit axis.” ’550 Patent, cl. 1. These features are described with respect to Figures 4 and 7, annotated below. *See id.* at 9:51–10:46, 34:27–40

(describing a “**handvac 112**,” “**surface cleaning head 104**,” and an “upright section 108” with an “**up flow duct**” or “**wand 144**” that has a “**wand axis 568**”).



As common sense dictates, the surface cleaning head has a “front end” (in this case, in the direction the vacuum moves forward in normal operation) and a “rear end” (opposite the front end). The rigid air flow conduit has an axis that extends “longitudinally” (in this case, running in the direction the conduit extends). Akhavein Decl. ¶¶ 42-58, 86-90. There is nothing confusing about these terms as used in the claims. *Id.*

Dyson’s argument that these orientation terms are indefinite not only ignores the context provided in the Asserted Patents, it also ignores that Dyson uses these terms in *its own patents* on vacuum technology. As one example, claims 1 and 14 of U.S. Patent No. 11,103,116 recite a handheld vacuum cleaner comprising, among other things, “a pistol grip which is positioned transverse to a *longitudinal* axis of the vacuum cleaner that runs from a *front* end to a *rear* end of the vacuum cleaner,” “an air inlet positioned *forward* of the pistol grip, wherein the *longitudinal* axis is parallel to the air inlet,” and “an electronic visual display screen that faces *rearward*.” Ex. J,

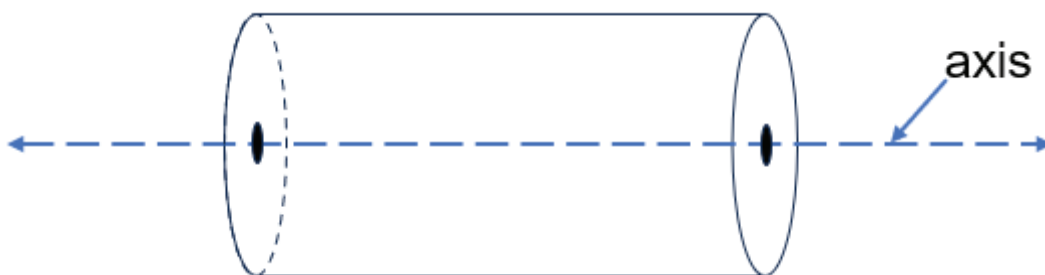
cls. 1, 14. Other claims require that “the electronic visual display is positioned axially *rearwards* of the pistol grip,” “the pistol grip is positionable in a generally *vertical* orientation when the *longitudinal* axis is *horizontal*, the pistol grip extending from a *lower* end . . . to an *upper* end,” and “the electronic visual display is positioned radially *above* the pistol grip.” *Id.* at cls. 4, 5; *see also* Akhavein Decl. ¶¶ 34-105; Exs. M & N. Dyson cannot credibly argue that these terms are perfectly understandable in its own vacuum patents, but they are indefinite in SharkNinja’s vacuum patents.

Unsurprisingly, courts regularly decline to construe (let alone find indefinite) “orientation” terms, finding that they are clear and easy to understand. *See Infection Prevention Techs., LLC v. Lumalier Corp.*, No. 10-12371, 2012 WL 3248232, at *20 (E.D. Mich. Aug. 8, 2012); *Lighting Def. Grp. LLC v. Shanghai Sansi Elec. Eng'g Co. Ltd.*, No. CV-22-01476-PHX-SMB, 2024 WL 185109, at *4 (D. Ariz. Jan. 17, 2024); and *Cyber Acoustics, LLC v. Belkin Int'l, Inc.*, No. 3:13-cv-01144-SI, 2014 WL 1225198, at *9 (D. Or. Mar. 24, 2014) (all declining to construe orientation terms and adopting plain and ordinary meanings). The result is no different here, where the claims and specification give more than enough guidance to understand the scope of the claims. Dyson’s wholesale allegation that all orientation terms in all eight Asserted Patents are indefinite is unsupported by the plain and ordinary meanings of these terms, and it is unsupported by the intrinsic record. These terms are not indefinite, and they require no construction.

- B. “axis” and “projection of the . . . axis” (’607: 1-11; ’030: 1-3, 5-10, 12-13; ’038: 1, 10, 12-15; ’666: 1-4, 6-12; ’550: 1, 4, 6-14, 17-24, 28; ’472: 1, 9-10, 13-14, 17, 22, 25)

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
No construction necessary. Not indefinite.	“axis”: a straight line that extends axially through the associated structure and no further. “projection of the . . . axis”: an extension of the straight line beyond the associated structure. Otherwise indefinite.

With respect to these “axis” terms, Dyson’s proposed constructions are contrary to both the plain meaning and the intrinsic record. Under the plain meaning, an “axis” is an imaginary line, projecting infinitely in both directions, about which a body rotates or that divides a shape into parts. Akhavein Decl. ¶¶ 107-113. For example, an “axis” of a cylinder would be the imaginary line that passes through the centers of the circles on both ends. *Id.* The axis projects beyond the ends of the cylinder; in other words, the portion of the axis *within* the cylinder and the portions of the axis that project in both directions *outside* of the cylinder are all part of the “axis.” *Id.*



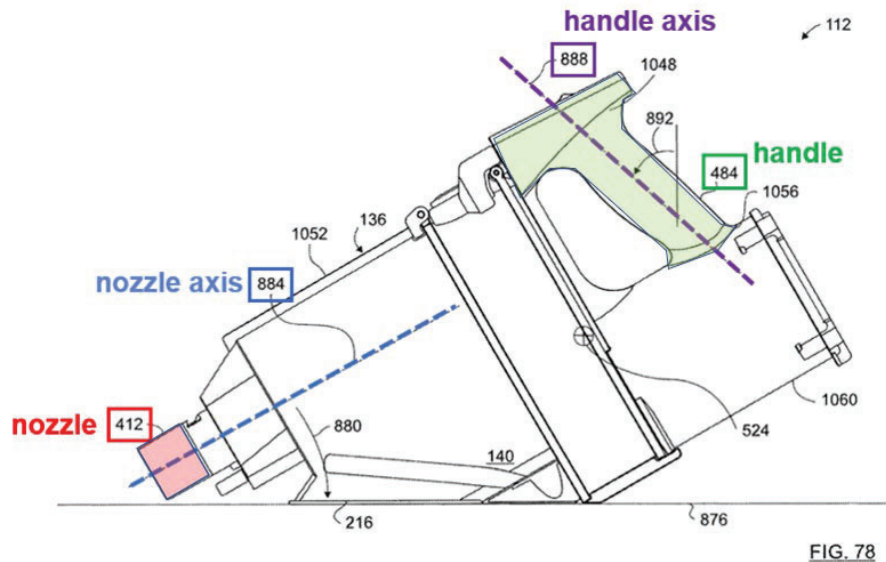
Dyson arbitrarily segments an axis into parts, arguing that an “axis” is only the finite portion that “extends axially through the associated structure,” whereas a “projection of the axis” is a *different* imaginary line, this one apparently infinite, extending “beyond the associated

structure.” Dyson’s proposal is contrary not only to the common understanding of “axis” but also the intrinsic record.

The claims contradict Dyson’s proposal. The claims themselves render Dyson’s proposal nonsensical. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 646 F.3d 1249, 1255 (Fed. Cir. 2010) (holding that “[a] claim construction that renders asserted claims facially nonsensical cannot be correct”) (internal citations omitted). For example, claim 1 of the ’030 Patent recites a “handle having a hand grip portion” that has a “hand grip portion axis that intersects the suction motor.” ’030 Patent, cl. 1. This element would be ***impossible*** according to Dyson’s proposal. If the hand grip portion “axis” stops at the boundary of the hand grip, as Dyson contends, it cannot possibly “intersect[] the suction motor,” because the handle (obviously) does not physically extend into the motor. *See, e.g.*, ’550 Patent at Fig. 96. Because the axis is ***not*** finite, however, it projects beyond the handle to intersect the suction motor, consistent with the plain meaning. As another example, claim 2 of the ’038 Patent recites a “suction motion and fan assembly” whose “axis of rotation intersects the handle.” ’038 Patent, cl. 2. Again, because the handle cannot physically pass through the suction motor and fan assembly, this element would be impossible under Dyson’s proposal. But it is consistent with the plain meaning, where the imaginary axis projects beyond the suction motor and fan assembly to intersect the handle.

The specifications contradict Dyson’s proposal. Just like the claims, the specifications use the term “axis” in a manner consistent with the plain meaning and incompatible with Dyson’s proposal. As one example, Figure 78 of the ’550 Patent, annotated below, depicts two “axes” that extend beyond the physical boundaries of the associated structure. Figure 78 depicts a “**nozzle 412**” having a “**nozzle axis 884**” extending beyond both ends of the nozzle, as well as a “**handle 484**” having a “**handle axis 888**” extending beyond both ends of the handle, and the axes

themselves are included as dashed lines in the figure and shown to extend beyond the handles, as highlighted below:



'550 Patent at Fig. 78 (highlights added) and 31:58–60 and 32:54–56. The specification makes no attempt to distinguish, as Dyson does, the portion of the axis that extends through the physical structure and the portion that projects beyond the physical structure—it is all part of the axis. *Id.*

The Asserted Patents are replete with similar examples of an “axis” that—contrary to Dyson’s proposal—extends beyond its corresponding physical structure. *See, e.g.*, '550 Patent at Fig. 21, 13:4–14 (depicting a “motor axis 252” that extends beyond the motor); '030 Patent at 21, 13:3–13 (same); '038 Patent at 21, 13:7–17 (same); '550 Patent at Fig. 22, 13:4–14 (depicting a “hinge axis 236” that extends beyond the door hinge); *id.* at Fig. 23, 13:4–14 (depicting a “cyclone axis 248” that extends beyond the cyclone chamber); *id.* at Fig. 55, 27:35–50 (depicting a “cyclone axis 392” that extends beyond the cyclone); *id.* at Fig. 96, 34:30–49 (depicting a “connector axis 1124” that extends beyond the connector); '607 Patent at Fig. 5, 12:49–55 (depicting an “axis 67” of the wheel that extends beyond the two wheels); '666 Patent at Fig. 2b, 4:11–37 (depicting a first longitudinal axis 122 and a second axis 132 that both extend beyond the outer wall of the

apparatus); '472 Patent at Fig. 2, 4:29–37, 5:18–23 (depicting a “filtration member axis 246” that extends beyond the filtration member 224, and a “dirt collection chamber longitudinal axis 261” that extends beyond the dirt collection chamber).

These terms are not indefinite. Dyson argues that if the Court (correctly) rejects its proposals, which are incompatible with the plain meaning and intrinsic record, these terms are indefinite. But there is no evidence—let alone clear and convincing evidence—that a skilled artisan cannot reasonably ascertain what these terms mean. As discussed above, “axis” has a well-understood meaning that is used consistently throughout the claims and specifications. *See* Akhavein Decl. ¶¶ 107-122. These terms require no construction.

C. “the handle having a hand grip portion” ('550: 1, 4, 6-11, 22, 28; '030: 1-3, 5-10, 12-13)

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
No construction necessary.	“the handle having a feature that assists with gripping”

It is a cardinal sin of claim construction to read limitations from the specification’s embodiments into the claims. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“[A] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”). Dyson’s proposal transgresses even further: it tries to inject a limitation—that the claimed vacuum’s handle has a “feature that assists with gripping”—found ***nowhere in the intrinsic record***. Dyson’s proposal should be rejected.

Both the '550 and '030 Patents recite a hand vacuum cleaner or surface cleaning apparatus with a “handle” that has a “hand grip portion.” '550 Patent, cl. 1; '030 Patent, cl. 1. As the plain language implies, the “hand grip portion” is simply the portion of the handle where a hand grips,

as opposed to other portions of the handle. Akhavein Decl. ¶¶ 124-125. For example, a pistol has a handle with a hand grip portion (where the user's hand grips), and the pistol's handle also has a bottom portion where ammunition may be loaded. *Id.*

While the intrinsic record does not have an explicit definition of a “hand grip portion,” the ’550 Patent specification (which the ’030 Patent shares) contemplates how a user may grasp the handle, in reference to Figure 78 (annotated above at p. 12):

In many cases, handvac 112 may be stored on a surface below a user's elbows. A user may angle their forearm downwardly to grasp handle 484 of handvac 112. In this case, the user's fingers and palm may be naturally aligned for grasping a handle which is angled forwardly of vertical. For example, to grasp a vertically oriented handle that is positioned below a user's elbow, a user may need to contort their wrist to conform to the orientation of the handle.

’550 Patent at 32:46–53. The specification differentiates this hand grip portion from, for example, a “first handle end” at the upper end of the handvac and a “second handle end” towards the lower end of the handvac. *Id.* at 33:28–32, Fig. 78. These teachings are consistent with the plain meaning—*i.e.*, a user can grasp or grip the “handle” using the “hand grip portion.”

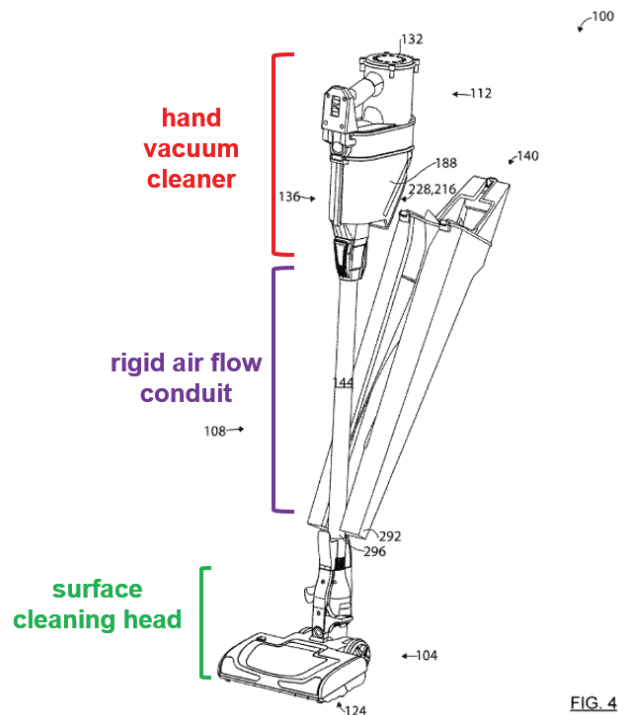
The plain language does not require a “hand grip portion” to be a special “feature” that “assists with gripping,” and nowhere does the specification—or any other portion of the intrinsic record—describe such a feature of the vacuum handle. Dyson injects this limitation out of thin air. Dyson's proposal, which is contrary to the plain meaning and intrinsic record, should therefore be rejected. *Phillips*, 415 F.3d at 1318 (reasoning that it is improper to limit a term based on extrinsic evidence which is unreliable over intrinsic evidence).

D. “extendable” (’550 Patent: claims 1, 4, 6-14, 17-24, 28)

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
No construction necessary.	“capable of being made longer”

As with the term “hand grip portion,” Dyson’s proposal for “extendable” seeks to impose a limitation found nowhere in the intrinsic evidence—*i.e.*, that the “rigid air flow conduit” claimed in the ’550 Patent be “capable of being made longer.” Dyson’s proposal is completely detached from the claim language and specification, which provide no support for its contrived limitation.

The claims of the ’550 Patent recite (a) a “hand vacuum cleaner,” (b) a “surface cleaning head,” and (c) a “rigid air flow conduit extendable between the cleaning head . . . and the hand vacuum cleaner. . . .” These limitations are depicted in Figure 4, annotated below:



To a skilled artisan, the plain and ordinary meaning of the claim language in light of the specification is simply that the “rigid air flow conduit” extends between the surface cleaning head

and the hand vacuum cleaner. Akhavein Decl. ¶ 130. This is the only meaning supported by the intrinsic record.

In the '550 Patent, nowhere do the claims or specification describe an air flow conduit that is “capable of being made longer.” To the contrary, the claims recite “a rigid air flow conduit” that is “extendable *between*” the surface cleaning head and the hand vacuum cleaner. '550 Patent, cl. 1. Indeed, the claim language reiterates that the rigid air flow conduit “*extends between* the cleaning head air outlet and the hand vacuum cleaner air inlet.” *Id.* One of ordinary skill would understand that, in view of the specification, the rigid air flow “extends between” the cleaning head and the hand vacuum cleaner, not that the rigid air flow conduit somehow changes size or shape. Akhavein Decl. ¶¶ 129-132.

While the specification never uses the term “extendable,” it does describe several embodiments of the air flow conduit—none of which are “capable of being made longer.” For example, the specification describes with reference to Figures 1–3 a surface cleaning apparatus with, consistent with the claims, “a surface cleaning head 104, an upright section 108 [corresponding to the rigid air flow conduit], and a hand-carriable vacuum cleaner 112.” '550 Patent at 9:55–58. The apparatus has “an airflow path *extending between* the inlet and the outlet.” *Id.* at 10:13–15. Specifically, the airflow path “*extends* from dirty air inlet 124 through surface cleaning head 104, upright section 108 [*i.e.*, the rigid airflow conduit], and handvac 112 to clean air outlet 132.” *Id.* at 10:18–20. In another embodiment, the upright section 108 (again, corresponding to the rigid airflow conduit) includes “wand 144,” and “[t]he airflow path may *extend* from dirty air inlet 124 of surface cleaning head 104 downstream through wand 144 and then cyclone bin assembly 136 of handvac 112.” *Id.* at 18:31–40. Other examples from the specification confirm that the rigid airflow conduit extends between the surface cleaning head and

the hand vacuum cleaner; it is never described as capable of being made longer. *Id.* at 10:13–20, 18:35–40, 19:34–38, 25:26–37, 25:57–67, 29:1–8, 30: 9–14, 30:63–67, and 34:16–22. The patent uses similar terms—“extends,” “extends between,” “extending between,” and “extendable between”—as synonyms for the same concept. *See Array Biopharma, Inc. v. Alembic Pharms. Ltd.*, C. A. No. 22-cv-1277-GBW, 2024 WL 1637354, at *3 (D. Del. Apr. 16, 2024) (different claim terms can have synonymous meanings).

This term needs no construction. The claims, when read in light of the specification, are clear that the rigid air flow conduit extends between the surface cleaning head and the hand vacuum cleaner. Dyson’s proposal, which has no intrinsic support, should be rejected.

E. “parallel” (’666 Patent: claims 1-4, 6-12)

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
No construction necessary.	“extending in the same direction and everywhere equidistant”

Dyson’s proposal for “parallel” conflates two distinct phrases—“parallel *to*” versus “*in* parallel”—that have distinct meanings in the ’666 Patent. The word “parallel” appears three times in the claims. Consistent with Dyson’s proposal, dependent claims 11 and 12 use the phrase “*parallel to*” to indicate *direction*. ’666 Patent, cl. 11 (“the rotational axis of the fluid flow motor is displaced from the passage axis in a direction *parallel to* the central longitudinal axis”); *id.* cl. 12 (“the rotational axis of the fluid flow motor is *parallel to* the passage axis”). Claim 1, by contrast, recites a “second cyclonic cleaning stage comprising a plurality of cyclones *in parallel* that are arranged around a central portion.” *Id.* cl. 1. Unlike claims 11 and 12, claim 1 does not require that the plurality of cyclones be *directionally* “parallel *to*” any axis. Rather, claim 1 requires that the cyclones operate “*in parallel*”—*i.e.*, operating at the same time and not in series. Akhavein Decl. ¶¶ 137-139.

The specification makes clear the distinction between components that are “parallel to” one another directionally (as in claims 11 and 12), versus the second stage cyclones that operate “in parallel” (as in claim 1). *Compare* ’666 Patent at 4:32–37, 4:54–65, 5:55–61, and Abstract (describing components/axes “parallel to” other components/axes) *with id.* at 1:25–27, 3:16–19, and 4:25–31 (describing the cyclones “in parallel”). This usage makes sense in the context of the ’666 Patent, which discloses and claims a multi-stage cyclonic cleaning apparatus with a first and second cyclonic cleaning stages operating in series—*i.e.*, one after the other. *See, e.g., id.*, cl. 1 (the second cyclonic cleaning stage is positioned “downstream” of the first cyclonic cleaning stage). To contrast this *serial* arrangement of first and second cyclone stages in series, the patent makes clear that the cyclones in the second stage are “*in parallel*,” meaning that the airflows in these cyclones are divided but simultaneous. *Id.*; Akhavein Decl. ¶¶ 138–140.

Dyson likely relies on the inapposite principle that the same claim term should be construed the same way across all claims of a patent. *See Phillips*, 415 F.3d at 1314. The response is simple—the claims do not use the same term. Consistent with the distinction imposed by the different phrases recited in the claims—“parallel to” versus “in parallel”—one of ordinary skill would understand these phrases to have their different, well-understood meanings. Akhavein Decl. ¶¶ 133–138. And neither requires construction. Dyson’s attempt to merge these two linguistically distinct usages is unsupported the intrinsic record and is an arbitrary attempt to unduly narrow the claim element. Dyson’s proposal should be rejected.

F. Preamble/“hand carriable” (’607 Patent: claims 1-13)

SharkNinja’s Proposed Construction	Dyson’s Proposed Construction
Preamble is limiting. No further construction necessary.	Not limiting. If construed as limiting, then for “hand carriable,” plain and ordinary meaning: “able to be carried by a hand or hands.”

The preamble to the ’607 Patent’s independent claims—“[a] hand carriable surface cleaning apparatus”—is limiting for multiple reasons. The preamble is limiting first because “the claim(s) depend on it for antecedent basis.” *C.W. Zumbiel Co. v. Kappos*, 702 F.3d 1371, 1385 (Fed. Cir. 2012); *see also Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1358 (Fed. Cir. 2012) (citation omitted) (“[A] preamble phrase that provides antecedent basis for a claim limitation generally limits the scope of the claim.”). Further, the preamble here is limiting because “it recites particular structure or steps that are highlighted as important by the specification.” *Proveris Sci. Corp. v. Innovasys, Inc.*, 739 F.3d 1367, 1372 (Fed. Cir. 2014).

The preamble provides antecedent basis. The preamble provides antecedent basis for “the hand carriable surface cleaning apparatus” in multiple claims. Independent claim 12 recites “[a] hand carriable surface cleaning apparatus” in the preamble, and then later recites that “***the hand carriable surface cleaning apparatus*** further comprises a screen positioned in the fluid flow path between the first stage air inlet and the second stage air inlet.” ’607 Patent, cl. 12. The use of the definite article “the” in a claim refers back to terms previously introduced with “a” or “an.” *Baldwin Graphic Systems, Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008). The only antecedent basis for “the hand carriable surface cleaning apparatus” in the body of claim 12 is in the preamble. Similarly, the body of dependent claim 8 (which depends ultimately from claim 1) recites “***the*** hand carriable surface cleaning apparatus,” and the only antecedent basis for this term

is the preamble of claim 1. '607 Patent, cl. 8. That the preamble is required for antecedent basis alone is sufficient reason that the preamble is limiting. *See Deere & Co.*, 703 F.3d at 1358 (“[A] preamble phrase that provides antecedent basis for a claim limitation generally limits the scope of the claim.”) (citations omitted).

The preamble recites critical structure. Additionally, the preamble is limiting where it “recit[es] additional structure or steps underscored as important by the specification.” *Catalina Marketing Intern. v. Coolsavings.com*, 289 F.3d 801, 808 (Fed. Cir. 2002) (citations omitted). Each and every claim of the '607 Patent requires a “handle,” which to a skilled artisan is intended for carrying by hand. Akhavein Decl. ¶ 143. The first phrase of the Abstract is “[a] ***hand carriable surface cleaning apparatus***.” '607 Patent, Abstract. The specification defines the “field” of the invention to be “a surface cleaning apparatus comprising a base with a removable ***portable*** surface cleaning unit such as a pod or other ***hand carriable*** surface cleaning apparatus wherein the ***portable*** surface cleaning apparatus is usable when mounted on the base or when removed therefrom.” '607 Patent at 1:25–30. Moreover, the specification distinguishes “[u]pright vacuum cleaners,” which “the consumer does not have to carry,” from “***hand carriable***” vacuum cleaners like those in the claims. *Id.* at 1:37–54. The ubiquitous focus on the “portable” and “hand carriable” nature of the embodiments throughout the '607 Patent indicates that the preamble is limiting. *See, e.g., id.* at 1:25-30, 1:64-6:6, 8:35-9:14, 10:56-59, and 11:30-35.

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CERTIFICATE OF SERVICE

I hereby certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants on May 10, 2024.

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