

## STANDARD INFORMATION

**Standard Number:** UL 982

**Standard Name:** Motor-operated Household Food Preparing Machines

**Standard Edition and Issue Date:** 7<sup>th</sup> Edition Dated June 10, 2015

**Date of Revision:** November 30, 2016 and October 25, 2017

**Date of Previous Revision of Standard:** June 24, 2015

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **November 30, 2021**

## IMPACT, OVERVIEW, AND ACTION REQUIRED

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revise requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revise requirements.

### Overview of Changes:

**The following changes reflect the November 30, 2016 revision.**

- Blender with Capacitive Touch Screen Control.
- Addition of Blender Blade Endurance Test
- Button or Coin Cell Batteries of Lithium Technologies – Proposal to Reference UL 4200A
- Fill Line for Food Processors with Feed Opening and without Discharge Opening
- Wand Mixer Unintentional Operation
- Cautionary Marking Legibility and Visibility
- Authorized Service Centers

**The follow changes reflect the October 25, 2017 revision.**

- Blender accessibility, stacked blade assembly and blender tamper
- Magnetic interlock requirements
- Important safeguards clarification
- New supplement for household and hospitality-use single-serving cold beverage dispensers

Specific details of new/revise requirements are found in table below.

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**



**Client Action Required:**

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

**Current Listings Not Active?** – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

**STANDARD INFORMATION**

CLAUSE	VERDICT	COMMENT
<i>Additions to existing requirements are <u>underlined</u> and deletions are <del>shown-lined</del> out below.</i>		
<b>THE FOLLOWING CHANGES REFLECT THE NOVEMBER 30, 2016 REVISION</b>		
6	Info	<b>Components</b>
6.5	Info	<b>Controls</b>
6.5.2	Info	Operating controls  <i><b>New clause added;</b></i>  A capacitive touch screen control on a blender with a two-step ON function as specified in 28.4.6.3 shall additionally be subjected to the following without loss of the two-step ON function:  a) Electronic Control Circuits Test of Section 50, b) Electrostatic Discharge of in accordance with Electromagnetic compatibility (EMC) – Part 4-2: Testing and Measurement Techniques – Electrostatic Discharge Immunity Test, IEC 61000- 4-2, test level 4 being applicable. Ten discharges having a positive polarity and ten discharges having a negative polarity are applied at each preselected point, and c) Radiated Fields in accordance with Electromagnetic compatibility (EMC) – Part 4-3: Testing and Measurement Techniques – Radiated, Radio-Frequency, Electromagnetic Field Immunity Test, IEC 61000-4-3, test level 3 being applicable.
7	Info	<b>Frame and Enclosure</b>  <i><b>New clause added;</b></i>
7.3.1		If a blender has an exterior surface of glass or comparably brittle material, such as a capacitive touch screen, which is part of the enclosure of live parts, the material shall be capable of withstanding the stresses likely to be encountered in actual service. Such parts shall be subjected to the Impact Test in accordance with 61.5.1.4.
22	Info	<b>Moving Members</b>



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		<b><i>New clause added;</i></b>
22.5		To determine if a blender complies with the requirement in 22.1, the appliance shall be subjected to the Blender Blade Endurance Test, Section 43A.
		<b><i>New section added;</i></b>
27A		Button or Coin Cell Batteries of Lithium Technologies
27A.1		To reduce the risk of injury due to battery ingestion, the battery compartment of an appliance or any accessory, such as a wireless control, incorporating one or more replaceable coin cell batteries of lithium technologies shall comply with the Standard for Products Incorporating Button or Coin Cell Batteries of Lithium Technologies, UL 4200A, if the appliance or any accessory is intended for use with one or more single cell batteries having a diameter of 1.25 inch (32 mm) or less with a diameter greater than its height.
28	Info	<b>Appliances</b>
28.4	Info	<b>Blenders</b>
28.4.6	Info	Blender tamper
		<b><i>New clause added;</i></b>
28.4.6.1		<p>A blender with a capacitive touch screen shall be constructed to reduce the risk of unintentional operation of the blender. The touch screen shall be:</p> <ul style="list-style-type: none"><li>a) Provided with a flashing light, warning marking of 69.25 and instructions as specified in 73.32 when a single touch is needed to initiate operation of the blender;</li><li>b) Recessed or guarded (See 28.4.15); or</li><li>c) Provided with a two-step operation as specified in 28.4.16.</li></ul>
		<b><i>New clause added;</i></b>
28.4.6.2		The touch screen is considered to be recessed or guarded to reduce the risk of unintentional operation if a cylindrical rod, having a diameter of 1.58 inches (40 mm) and a hemispherical end, applied to the touch screen with the blender in any stand-by mode is unable to contact the touch screen in an area that would initiate operation of the blender.
		<b><i>New clause added;</i></b>
28.4.6.3		<p>A blender touch screen provided with a two-step operation to reduce the risk of accidental operation as specified in 28.4.14 shall require two separate actuations to start operation of the blender and be provided with:</p> <ul style="list-style-type: none"><li>a) A plainly identified one-step OFF or STOP function (See also 26.12 and Exception No. 3 of 6.5.2.2);</li><li>b) An indicator light or other visual indicator to indicate when the touch screen is in a condition where a single touch is needed to initiate operation of the blender (after Step 1);</li><li>c) A time-out function on the first step of no longer than 30 seconds; and</li><li>d) Instructions as specified in 73.2.2.</li></ul>

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		<b><i>New clause added;</i></b>
28.4.6.4		With respect to 28.4.16, after the operation of the blender is manually stopped, or after automatically stopping at the completion of a programmed sequence, the blender shall return to a condition requiring a two-step function to initiate operation.
		<b><i>New clause added;</i></b>
28.4.6.5		With respect to 28.4.17, for a blender with a momentary contact pulse operation, Step 1 may remain active as long as the duration between the Pulse operations is no more than 30 seconds.
28.5	Info	<b>Food processors</b>
		<b><i>New clause added;</i></b>
28.5.6		The rated capacity shall be marked on the bowl of food processors with a feed opening where the processed food is collected in the bowl under the slicing or shredding blade. See 73.19.1(g).
28.11	Info	<b>Wand-type mixers</b>
		<b><i>New clause added;</i></b>
28.11.1.1	Info	A switch is considered to comply with 28.1.1(a) if applying a cylindrical rod with a 1.58 inch (40 mm) diameter and a hemispherical end to the switch actuator with a force not exceeding 1.1 lbf (5 N) does not result in operation of the appliance.
		<b><i>New section added;</i></b>
43A		<b>Blender Blade Endurance Test</b>  This section contains requirements for the blender blade endurance test (see standard for details).
61	Info	<b>Enclosures of Polymeric Material for Portable Appliances</b>
61.5	Info	<b>Impact</b>
61.5.1	Info	General
		<b><i>New clause added;</i></b>
61.5.1.4		The impact test in accordance with 61.5.3 shall also be conducted on breakable exterior surfaces as specified in 7.3.1. The blender shall then be subjected to the Overflow Test of 38.1 unless the blender is no longer functional or the surface withstands the impact test without cracking or breaking.
69	Info	<b>Cautionary</b>
69.1	Info	<b>General</b>
		<b><i>New clause added;</i></b>
69.1.6		A caution marking intended to instruct the operator shall be legible and visible from the operator's position that provides maximum exposure to the risks.

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***New clause added;***

69.1.6.1 With respect to 69.1.6, unless provided with means to increase the contrast between the marking and background, such as contrasting colors or surface textures, a molded-in marking shall have a raised height above or a depth below the surface of at least 0.010 inches (0.25 mm).

69.2 Info **Food mixer**

***New table added;***

**Specific product markings**

Table 69.1

Marking		Location
1.	Unplug before assembling or removing parts <sup>a</sup>	Visible when assembling or removing parts.
2.	Unplug before cleaning <sup>a</sup>	Visible from operator's position during normal use.
3.	Unplug before handling blades <sup>a</sup>	Visible when handling blades.
4.	Do not put in water	On main appliance body. <sup>b</sup>
5.	Read instructions before using	On main appliance body. <sup>b</sup>
6.	Engage lockout (interlock) before handling blades	Visible when handling blades, near blade lockout.
7.	Moving Parts – Keep fingers out of feed and discharge openings <sup>c,d</sup>	On cover near feed and discharge openings.
8.	Sharp Blade - Always use food pusher	On cover near feed opening.

<sup>a</sup> For permanently connected appliances, replace “unplug” with “turn off”.  
<sup>b</sup> This marking may appear on the bottom of the appliance.  
<sup>c</sup> For products with a hopper and without a feed opening, replace “feed and discharge openings” by “hopper and discharge opening”.  
<sup>d</sup> Where access through the discharge opening does not present a risk of injury, replace “feed and discharge openings” with “feed opening”.

***New clause added;***

69.2.2 With respect to Item 1 of Table 69.1 for a stand mixer, the marking shall be visible with and without the bowl in place.

***New clause added;***

69.2.3 For a hand-held food mixer that can also be operated while supported by a stand, the markings shall be located to be visible when operated with and without the food mixer on the stand.

69.3 Info **Blending mixer**

***New clause added;***

69.3.2 The main portion of the open-top blender container cover shall be marked, “Do not operate without this cover in place”.



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		<b><i>New clause added;</i></b>
69.3.3		When it is possible to operate a blender with the blade assembly itself on a blender base prior to its assembly to a container, the blender shall be marked "Never place blade assembly on base unless assembled to jar." This marking shall be located on the blender base near the blade drive and shall be visible with and without the blade assembly in place. If the marking is not visible with the jar collar in place, the marking shall also be on the jar collar.
		<b><i>New clause added;</i></b>
69.3.4		For a closed top blender; an individual serving size open-top blender container, in accordance with the Exception to 28.4.3.1; and a blender with pour openings on the cover, in accordance with the Exception No. 2 to 28.4.3.2; the container or cover shall be marked "Do Not Blend Hot Liquids."
69.9	Info	<b>Vegetable shredder/slicer (cone type)</b>
		<b><i>New clause added;</i></b>
69.9.1		A vegetable shredder/slicer (cone type) shall be marked with Items 1 and 7, and if hand held item 4 of Table 69.1.
69.25		<b>Blender with capacitive touch screen and appliance with stand-by mode</b>
69.25.1		<u>A blender with capacitive touch screen and</u> products employing accessible moving parts and electronic controls with a stand-by mode, required to be provided with a flashing light in accordance with 28.4.6.3(a) or the Exception to 26.12 shall be marked next to the flashing light "When flashing avoid any contact with moveable parts."
		<b><i>New section added;</i></b>
69.26		<b>Appliances with a jar grasping function</b>
69.26.1		A marking shall be provided on an appliance provided with a grasping function to open jars, which is not obvious to the user, identifying the function to the user.  Exception: A marking is not required if there is no risk of a cut-type injury.
72	Info	<b>All Appliances</b>
72.1 (f)		Do not operate any appliance with a damaged cord or plug or after the appliance malfunctions, or is dropped or damaged in any manner. <del>Return appliance to the nearest authorized service facility for examination, repair or electrical or mechanical adjustment. Contact the manufacturer at their customer service telephone number for information on examination, repair, or adjustment. (Domestic customer service telephone number must be stated in the instruction manual, literature contained within the product's packaging or permanently marked on the appliance).</del>  <u>Exception No. 1: If the manufacturer elects, a customer service email address or a website with a contact form may be used instead of a domestic customer service telephone number. The email or website address must be stated in the instruction manual, literature contained within the product's packaging, or permanently marked on the appliance.</u>

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Exception No. 2: If the manufacturer has authorized service facilities, instruction to return the appliance to the nearest authorized service facility may be used instead of instructing the user to contact the manufacturer at the customer service phone number.

73	Info	<b>Specific Appliances</b>
73.2	Info	<b>Blending mixers</b>
		<b><i>New clause added;</i></b>
73.2.2		For a blender with a capacitive touch screen with a two-step ON function as specified in 28.4.6.3, replace 72.1(d) with the following:  Unplug from outlet when not in use, before putting on or taking off parts and before cleaning. Flashing light (or identify other means used) indicates ready to operate. Avoid inadvertent contact with the touch screen.
73.19	Info	<b>Food processors</b>
		<b><i>New subclause added;</i></b>
73.19.1 (g)		“Do not fill the bowl above the marked maximum fill line (or rated capacity) to avoid risk of injury due to damage to the cover or bowl.” (See 28.5.6)
73.32		<b><u>Blender with capacitive touch screen and appliances with stand-by mode</u></b>
73.32.1		<u>A blender with capacitive touch screen and appliances</u> employing accessible moving parts and electronic controls with a stand-by mode, and required to be provided with a flashing light in accordance with <u>28.4.14(a)</u> or the Exception to 26.12:  a) Replace 72.1(e) with the following: “Flashing light indicates ready to operate. Avoid any contact with blades or moveable parts.”
<b>THE FOLLOWING CHANGES REFLECT THE OCTOBER 25, 2017 REVISION.</b>		
26	Info	<b>Switches, Controls, and Interlocks</b>
		<b><i>New clause added;</i></b>
26.10.1		For a magnetic interlock, common magnets are considered readily available with respect to 26.10(c). A magnetic interlock is considered to comply with 26.10(c) if common magnets are not able to defeat the interlock by a construction with:  a) An actuating magnet requiring a higher magnetic flux density than common household magnets to actuate the interlock, such as by use of a rare earth magnets;  b) A coded actuating magnet with a special pole arrangement, such as North-South-North;  c) Recessing or guarding of the area where the actuating magnet must be located; or



- d) More than one magnetic interlock where magnets will not stay in place but must be held in place in order to activate the interlock due to the location

**New clause added;**

26.10.2

With respect to 26.10.1, Table 26.1 defines the typical magnetic flux densities for various types of common and rare earth magnets.

**New table added;**

**Typical Magnetic Flux Density**

Table 26.1

Magnet Type	Approx. Magnetic Flux Density (Gauss)
Common Refrigeration Magnets	50
Common Iron (Fe) Magnets	100
Neodymium-Iron-Boron (Rare Earth) Magnets	2,000

28

Info

**Appliances**

28.4

Info

**Blenders**

**New section added;**

28.4.1

Blade accessibility

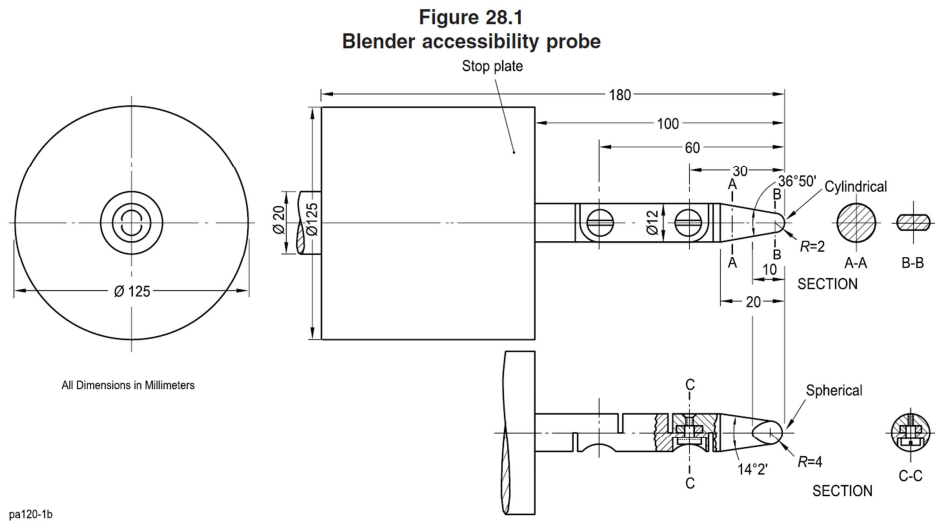
28.4.1.1

The blades of a blender with an open top container shall be recessed within the blender container to reduce the risk of injury due to unintentional contact with moving parts.

28.4.1.2

If the blades are not accessible to the probe illustrated in Figure 28.1 with the blender cover removed, the blender is considered to comply with 28.4.1.1.

Figure 28.1



28.4.1.3

If the blender container is provided with a reliable, cover-actuated interlock and the blades are not accessible to the probe of Figure 7.1 with the blender cover in place through the cover opening, the blender is considered to comply with 28.4.1.1.





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		<b><i>New section added;</i></b>
28.4.5		Blender tamper
28.4.5.1		A blender provided with a tamper shall be constructed so that the tamper does not contact the blades when inserted through the cover opening with a force of 3.4 lbf (15 N).
34	Info	<b>Normal Temperature Test</b>
3.3	Info	<b>Blending mixers</b>
		<b><i>New clause added;</i></b>
34.3.3		If a blender is provided with a tamper, the input and temperature test shall be conducted without the use of the tamper when processing the carrot/water load. If the blender is intended for processing dry loads, such as coffee or grains, and the use of the tamper is required to perform those functions, the tests shall also be conducted with that load as specified for the related appliance (coffee mill, grain mill, etc.) with a force of 1.1 lbf (5 N) applied to the tamper in continuous up and down strokes or circular motions as recommended by the instructions.
72	Info	<b>All Appliances</b>
The following shall be included in the Instruction Manual for all appliances:		
<b>IMPORTANT SAFEGUARDS</b>		
When using electrical appliances, basic safety precautions should always be followed including the following:		
72.1		<ul style="list-style-type: none"><li>a) Read all instructions.</li><li>b) Portable – To protect against risk of electrical shock do not put (state specific part or parts in question) in water or other liquid.</li><li>c) <u>This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they are closely supervised and instructed concerning use of the appliance by a person responsible for their safety. Close supervision is necessary when any appliance is used by or near children. Children should be supervised to ensure that they do not play with the appliance.</u>  <i><u>Exception: This appliance is not intended for use by children or by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge. Close supervision is necessary when any appliance is used near children. Children should be supervised to ensure that they do not play with the appliance.</u></i></li><li>d) <del>Portable – Unplug from outlet when not in use, before putting on or taking off parts, and before cleaning. Turn the appliance OFF, then unplug from the outlet when not in use, before assembling or disassembling parts and before cleaning. To unplug, grasp the plug and pull from the outlet. Never pull from the power cord.</del> Permanently Installed – Make sure appliance is OFF when not in use, before putting on or taking off parts, and before cleaning.</li></ul>

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- e) Avoid contacting moving parts.
- f) Portable – Do not operate any appliance with a damaged cord or plug or after the appliance malfunctions, or is dropped or damaged in any manner. Contact the manufacturer at their customer service telephone number for information on examination, repair, or adjustment. (Domestic customer service telephone number must be stated in the instruction manual, literature contained within the product’s packaging or permanently marked on the appliance).

*Exception No. 1: If the manufacturer elects, a customer service email address or a website with a contact form may be used instead of a domestic customer service telephone number. The email or website address must be stated in the instruction manual, literature contained within the product’s packaging, or permanently marked on the appliance.*

*Exception No. 2: If the manufacturer has authorized service facilities, instruction to return the appliance to the nearest authorized service facility may be used instead of instructing the user to contact the manufacturer at the customer service phone number.*

- g) The use of attachments not recommended or sold by the manufacturer may cause fire, electric shock or injury.
- h) Do not use outdoors (this may be omitted if it is specially designed for outdoor use).
- i) Portable – Do not let cord hang over edge of table or counter.
- j) Hand-held, other than cordless types – Do not let cord contact hot surface, including the stove.
- k) **SAVE THESE INSTRUCTIONS**

73	Info	<b>Specific Appliances</b>
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73.2	Info	<b>Blending mixers</b>
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The following shall be included in the Instruction Manual for blending mixers in addition to any other safety instructions required by the standard:

73.2.1

- a) “Keep hands and utensils out of container while blending to reduce the risk of severe injury to persons or damage to the blender (another trade name may be used). A scraper may be used but must be used only when the blender is not running (does not apply to an acceptable scraper integral with the appliance).”
- b) “Blades are sharp. Handle carefully.”
- c) Blenders that have a removable cutting assembly that can be driven with the jar removed shall include the following additional safeguard instruction: “To reduce the risk of injury, never place cutter-assembly blades on base without jar properly attached.”
- d) “Always operate blender with cover in place.”



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- e) Replace 72.1(g) with the following:
- “The use of attachments, including canning jars, not recommended by the manufacturer may cause a risk of injury to persons.”
- f) “When blending hot liquids, remove center piece of two-piece cover.” (If a two-piece cover is provided.)
- g) For closed-top containers replace (f) with:
- “Do not blend hot liquids.”
- h) For a cover with an opening near the edge of the cover for pouring and an additional vent opening per the Exception No. 1 to 28.4.3.2, replace (f) with: “When blending hot liquids, open or remove each non-pouring lid or cap, and close any edge cover openings intended for pouring.”
- i) For a cover with an opening near the edge of the cover for pouring and without an additional vent opening per the Exception No. 1 to 28.4.3.2, replace (f) with: “When blending hot liquids, open (remove) cap over pour opening.” (See also 42.1)
- j) For a blender provided with a tamper, replace (a) with the following: “Keep hands and utensils, other than the tamper provided, out of container while blending to reduce the risk of severe injury to persons or damage to the blender. The cover must remain in place when using the tamper through the cover opening. A scraper may be used but must be used only when the blender is not running.”
- k) For a blender with a trapped blade assembly and a cover actuated interlock as specified in 28.4.2.2, replace (b) with the following:
- 1) “Blade assembly is sharp, not locked in place and removable. Handle with care. When handling blade assembly, always hold by the shaft,”
  - 2) “To avoid a risk of injury, before pouring with the cover removed, carefully remove the blade assembly,” and
  - 3) If pour spout is provided on the cover: “If using the pour spout, hold the cover in place on the container (or “engage lid lock”) when pouring to avoid risk of injury.”

*Exception No. 1: In accordance with the Exception No. 2 to 28.4.3.2, replace (i) with (g).*

*Exception No. 2: In accordance with 28.4.3.3, the wording in (f), (h) and (i) shall indicate that the vented lid is to remain in place over the cover opening(s) when blending hot liquids.*

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***New section added;***

**SUPPLEMENT  
SA**

**HOUSEHOLD AND HOSPITALITY-USE SINGLE-SERVING COLD BEVERAGE  
DISPENSERS**

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This new section includes single-serving cold beverage dispensers for household- or hospitality-use (see standard section for details).

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**CUSTOMERS PLEASE NOTE:** This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.

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