

META	CATAGORIES	USER NEED
Utility	Adaptibility	The device can run tasks cordless
Utility	Adaptibility	The device is multi-functional
Utility	Adaptibility	The device can adapt to different voltage standards
Utility	Adaptibility	The device includes a feature to adjust performance and intensity during sessions based on user input (high/low/eco mode)
Utility	Adaptibility	The device can be used without internet access
Utility	Adaptibility	The device can be remotely operated
Utility	Adaptibility	The device can run in different temperature environments
Utility	Adaptibility	The device can work inside and outside the home
Utility	Adaptibility	The device can troubleshoot itself
Utility	Adaptibility	The device can pair with smart home systems
Utility	Adaptibility	The device has automated features
Utility	Adaptibility	The device's functions are unique and not redundant to other popular household devices
Utility	Convenience to operate	The device uses average household electricity sources, such as AA batteries or a standard charging outlet
Utility	Convenience to operate	The device needs almost no maintenance over its lifetime
Utility	Convenience to operate	The device does not require significant user input to function
Utility	Convenience to operate	The device can interact with or work coincident to other household appliances
Utility	Convenience to operate	The device is compatible with standard appliances
Utility	Convenience to operate	The device can receive voice inputs
Utility	Convenience to operate	The device requires little to no training to use
Utility	Convenience to operate	The device has ADA accessibility
Utility	Convenience to operate	The device has a storage compartment for extra components
Utility	Ease of installation/setup	The device can be easily installed by homeowner
Utility	Ease of installation/setup	The device can be easily uninstalled by homeowner
Utility	Ease of installation/setup	The device can be easily assembled
Utility	Ease of installation/setup	The device can be easily disassembled
Utility	Ease of installation/setup	The device has a quick setup
Utility	Ease of installation/setup	The device includes a tutorial for first-time users
Utility	Ease of installation/setup	The design of the device is not very complex
Utility	Ease of installation/setup	The device can provide audible instructions
Utility	Ease of installation/setup	The device installation protects against damaging its surroundings or leaving marks
Utility	Ease of production	The device can be mass-produced
Utility	Ease of production	The device is made of inexpensive materials
Utility	Maintainability	The device has a self-cleaning function
Convenience	Maintainability	The device can be easily and safely cleaned (dusted, wiped, washed, etc.)
Convenience	Speed/Efficiency	The device can be charged quickly
Convenience	Storage/Transport	The device is compact (can fit through doors, sit on tables, etc.)
Convenience	Storage/Transport	The device can be easily moved by homeowner
Convenience	Storage/Transport	The device is lightweight
Convenience	Storage/Transport	The device is easy to handle
Convenience	Storage/Transport	The device is easy to store
Convenience	Storage/Transport	The device casing uses easy to grip materials
Convenience	Storage/Transport	The device can be shipped safely
Convenience	Unobtrusiveness	The device runs quietly
Convenience	Unobtrusiveness	The device is aesthetically pleasing
Convenience	Unobtrusiveness	The device's design matches other devices of its type
Convenience	Unobtrusiveness	The device produces minimal odors
Convenience	Unobtrusiveness	The device interface allows for user customizability
Convenience	User feedback	The device has a built-in timer for tasks
Convenience	User feedback	The device has a battery-charge indicator
Convenience	User feedback	The device can play sound to alert the user
Convenience	User feedback	The device can display text to alert the user
Convenience	User feedback	The device has illuminated controls for operation in the dark
Convenience	User feedback	The device can save and recall user-defined settings
Convenience	User feedback	The device can report energy usage to the user
Convenience	User feedback	The device can report session statistics to the user
Convenience	User feedback	The interface of the device is labeled clearly
Convenience	User feedback	The device has an indicator that the device is powered
Convenience	User feedback	The device's weekly sessions can be scheduled by user
Convenience	User feedback	Alerts displayed by the device are easily understandable for english-speaking and non-english speaking users
Robustness	Adaptibility	The device can run in harsh weather conditions
Robustness	Adaptibility	The device can run with a backup power supply
Robustness	Maintainability	The device has a lifetime of at least three months being used consistently
Robustness	Reliability	The device produces consistent results when completing tasks
Robustness	Reliability	The device can be used more than once to complete its primary function
Robustness	Software protection	The device can detect if there is an error or that it has completed its task
Robustness	Software protection	The device is programmed to prevent user-misinput
Robustness	Speed/Efficiency	The device completes tasks quickly
Robustness	Speed/Efficiency	The device can remain powered through at least one session
Robustness	Structural durability	The device is protected against rust
Robustness	Structural durability	The device is protected against UV
Robustness	Structural durability	The device's exterior is heat-resistant
Robustness	Structural durability	The device is stain-resistant
Robustness	Structural durability	The device is resistant to dust and debris accumulation
Robustness	Structural durability	The device is durable
Robustness	Structural durability	The device has a casing
Robustness	Structural durability	The device contains shock absorpton materials
Robustness	Structural durability	The device is waterproof (humidity/spills)
Robustness	Structural durability	The device is protected against mishandling
Safety	Circuit protection	The device is protected against short-circuiting
Safety	Circuit protection	The device's electronics are protected against overheating
Safety	Circuit protection	The device has ground fault protection
Safety	Circuit protection	The device is protected from static shocks
Safety	Unobtrusiveness	The device collects data that does not violate user privacy
Safety	User safety	The device is made of non-volatile materials
Safety	User safety	The device produces minimal vibration when running a task
Safety	User safety	The device does not pose any significant safety risks to operate or handle
Safety	User safety	The device has child-safety features
Safety	User safety	The device is pet-safe
Safety	User safety	The device has proper hazard labels
Safety	User safety	The device materials are non-allergenic
Cost	Environmental impact	The device is designed to be recyclable at the end of its lifecycle
Cost	Environmental impact	The device is made from locally sourced materials
Cost	Maintainability	The device uses standard components
Cost	Maintainability	The device components are easily replaced
Cost	Maintainability	The device can easily be repaired by homeowner
Cost	Operation cost reduction	The device draws little electricity when completing a task
Cost	Operation cost reduction	The device draws little to no water when completing a task
Cost	Operation cost reduction	The device draws little to no electricity and/or other utilities when waiting between sessions
Cost	Operation cost reduction	The device is affordable to the average homeowner
Cost	Operation cost reduction	The device will automatically shut-down/sleep after a certain period between sessions

META	COUNT
Utility	33
Convenience	26
Robustness	19
Safety	12
Cost	10

CATAGORIES	COUNT
Adaptibility	14
Circuit protection	4
Convenience to operate	9
Ease of installation/setup	9
Ease of production	2
Environmental impact	2
Maintainability	6
Operation cost reduction	5
Reliability	2
Software protection	2
Speed/Efficiency	3
Storage/Transport	7
Structural durability	10
Unobtrusiveness	6
User feedback	12
User safety	7